



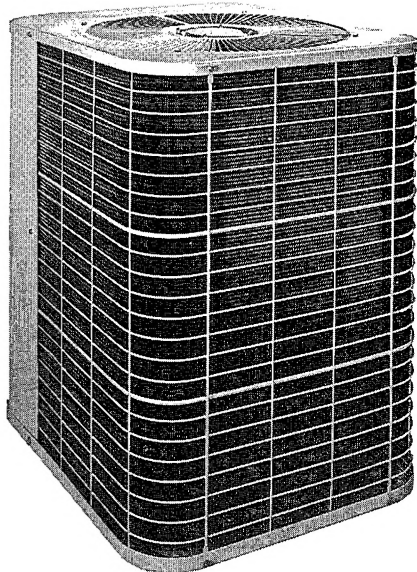
**Bryant**  
Air Conditioning

Indianapolis, IN  
City of Industry, CA

## SPLIT-SYSTEM HEAT PUMP UNITS

# MODEL 690A (60 Hz)

Sizes 018 thru 060



The 690A Outdoor Sections of Split-System Heat Pumps are designed for quiet, reliable heating during the winter and cooling during the summer. These heat pump systems provide economy of operation through energy conservation. They recover heat for indoor comfort from outdoor air during the heating season and, by automatically reversing the refrigerant system, remove indoor heat and excess humidity during the cooling season. All models are listed with UL, CSA, CEC and ARI.

### FEATURES

**ELECTRICAL RANGE**—All single-phase units are offered in 208/230 volts. Three-phase available in both 208/230 and 460 volt.

**COMPRESSOR**—Designed specifically for heat pump duty, with energy efficiency during heating and cooling operation. Each compressor is hermetically sealed against contamination to assure long life and dependable performance, internally sprung and externally mounted on rubber isolators for quiet operation. Continuous compressor operation is approved down to  $-30^{\circ}\text{F}$  ( $-34.4^{\circ}\text{C}$ ) in the heating mode, and down to  $55^{\circ}\text{F}$  ( $12.8^{\circ}\text{C}$ ) in the cooling mode. (See heating and cooling performance tables.) All models include a discharge-tube muffler to prevent sound transmission of the compressor pulsations to the indoor or outdoor coils.

**BUILT-IN-RELIABILITY COMPONENTS**—Includes a suction-tube accumulator that keeps liquid refrigerant from reaching the compressor; a low-pressure switch that stops the compressor if refrigerant charge is lost; a crankcase heater to keep the compressor oil warm and free of refrigerant for maximum lubricity; an internal compressor relief valve for high-pressure protection; and compressor start capacitor and relay components on single-phase units to assure reliable starting of the units during brownout conditions and low outdoor temperatures.

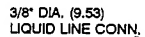
**DEFROST CONTROL BOARD**—Incorporates a defrost relay, defrost timer, and low-voltage terminal board. The defrost control is a time/temperature initiation/termination control which includes three field-selectable time periods of 30, 50, and 90 minutes.

**WEATHER-PROTECTIVE CABINET**—Steel is protected with a heavy coating commonly called "galvanizing," then coated with a layer of zinc phosphate to which a coat of modified polyester powder coating is applied and baked-on. This provides each unit with a hard, smooth finish that will last for many years.

All screws on cabinet exterior are coated for a long-lasting rust-resistant, quality appearance.

**UNIT DESIGN**—All units are equipped with totally enclosed fan motors for greater reliability under rain and snow conditions. (Ball bearing fan motors standard on 3 phase units.) The large, wraparound coil uses copper tube and enhanced aluminum fin and is designed for optimum heat transfer during heating and cooling. The vertical air discharge carries the sound and air up and away from adjacent patio areas and foliage. Sufficient space is provided between rows of composite coils so they can be cleaned with a common garden hose.

**EXTERNAL SERVICE VALVES**—Both service valves are brass, back seating type with sweat connections. Each valve has a service port for ease of checking operating refrigerant pressures.



CARRIER CORP INDIANAPOLIS IN  
313948-401 REV A 4620

# SPECIFICATIONS-690A

| SIZE                                       | 018-A             | 018-B        | 024-A        | 030-A        | 030-B        | 030-A        | 030-B        | 031-A        | 036-A        |
|--|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| OPERATING WT (lb)                          | 152               | 152          | 156          | 182          | 182          | 182          | 182          | 225          | 225          |
| ELECTRICAL                                 |                   |              |              |              |              |              |              |              |              |
| Unit Volts—Hertz—Phase                     | 208/230—60—1      | 208/230—60—1 | 208/230—60—1 | 208/230—60—1 | 208/230—60—1 | 208/230—60—3 | 208/230—60—3 | 208/230—60—1 | 208/230—60—1 |
| Operating Voltage Range†††                 | 187—253           | 187—253      | 187—253      | 187—253      | 187—253      | 187—253      | 187—253      | 187—253      | 187—253      |
| Unit Ampacity for Wire Sizing              | 12.2              | 12.1         | 17.7         | 21.8         | 23.2         | 14.6         | 14.8         | 21.8         | 28.7         |
| Min Wire Size (60°C/75°C Copper)<br>(AWG)* | 14/14             | 14/14        | 14/14        | 12/12        | 12/12        | 14/14        | 14/14        | 12/12        | 10/10        |
| Maximum Length (feet) (60°C/75°C)†††       | 61/61             | 61/61        | 42/42        | 55/55        | 51/51        | 44/44        | 43/43        | 55/55        | 66/66        |
| Max Branch Circuit Fuse Size (Amps)‡       | 20                | 20           | 30           | 35           | 40           | 25           | 25           | 35           | 50           |
| Compressor Rated Load Amps                 | 9.1               | 9.0          | 13.5         | 16.8         | 17.9         | 11.0         | 11.2         | 16.7         | 21.8         |
| Locked Rotor Amps                          | 52.0              | 49.0         | 71.0         | 82.0         | 83.5         | 67.5         | 66.0         | 86.0         | 106.0        |
| Fan Motor, HP & RPM                        | 1/10 & 1075       | 1/10 & 1075  | 1/10 & 1075  | 1/10 & 1075  | 1/10 & 1075  | 1/10 & 1075  | 1/10 & 1075  | 1/10 & 1075  | 1/4 & 1100   |
| Full Load Amps                             | 0.8               | 0.8          | 0.8          | 0.8          | 0.8          | 0.8          | 0.8          | 0.9          | 1.4          |
| COMPRESSOR AND REFRIGERANT                 |                   |              |              |              |              |              |              |              |              |
| Compressor                                 | Hermetic          |              |              |              |              |              |              |              |              |
| Refrigerant Charge (lb)†                   | 4.73              | 4.80         | 4.56         | 5.19         | 5.06         | 5.19         | 5.06         | 7.00         | 6.78         |
| OUTDOOR COIL & FAN                         |                   |              |              |              |              |              |              |              |              |
| Coil Face Area (Sq Ft)                     | 8.50              | 8.50         | 8.50         | 10.50        | 10.50        | 10.50        | 10.50        | 15.00        | 15.00        |
| Airflow (CFM)                              | 1900              | 1900         | 1900         | 1900         | 1900         | 1900         | 1900         | 2600         | 3000         |
| OPTIONAL EQUIPMENT                         |                   |              |              |              |              |              |              |              |              |
| Support Feet Kit—4-inch (4)                | 313916-701        |              |              |              |              |              |              |              |              |
| Snow Rack                                  | 313071-701        |              |              |              |              |              |              | 313072-701   |              |
| Indoor Time-Delay Relay                    | 313902-751        |              |              |              |              |              |              |              |              |
| Energy Minder                              | 941AHX000000 MCAA |              |              |              |              |              |              |              |              |
| Efficiency Alarm††                         | 313076-751        |              |              |              |              |              |              |              |              |
| Bypass Solenoid Valve—Defrost              | 314003-751        |              |              |              |              |              |              |              |              |
| Outdoor Thermostat                         | 313074-751        |              |              |              |              |              |              |              |              |
| Secondary Outdoor Thermostat               | 313074-752        |              |              |              |              |              |              |              |              |
| COMPROTEC®                                 | 313966-751        |              |              |              |              |              |              |              |              |
| Crankcase Heater                           | Standard          |              |              |              |              |              |              |              |              |
| Compressor Start Assist                    | 313965-752        |              | 313965-753   | 313965-755   | 313965-754   | N/A          |              | 313965-755   |              |
| Sound Blanket                              | 312990-751        | 312991-751   |              | 312994-751   |              |              |              | 312991-751   | 312994-751   |
| Bi-flow TXV (RPB)                          | 315175-752        |              | 315175-753   |              |              | 315175-754   |              |              | 315175-755   |
| Bi-flow TXV (Hard Shutoff)***              | 315175-759        |              | 315175-760   |              |              | 315175-761   |              |              | 315175-762   |
| Low-Pressure Switch                        | Standard          |              |              |              |              |              |              |              |              |
| High-Pressure Switch                       | 313079-751        |              |              |              |              | Standard     |              | 313079-751   |              |
| Filter Drier—Bi-flow (New Construction)    | P504-8083S        |              |              |              |              |              |              |              |              |
| Filter Drier—Bi-flow (Add-on or Placement) | P504-8163S        |              |              |              |              |              |              |              |              |
| Low-Ambient Controller‡‡                   | 316196-751        |              |              |              |              |              |              |              |              |
| Low-Ambient Motor**                        | 316185-751        |              |              |              |              | Standard     |              | 316185-752   | 316185-754   |
| Evaporator Freeze Thermostat**             | 316584-751        |              |              |              |              |              |              |              |              |
| Isolation Relay**                          | 316586-751        |              |              |              |              |              |              |              |              |
| Liquid Solenoid Valve                      | 316556-752        |              |              |              |              |              |              |              |              |
| Thermostat/Subbase—Manual °F               | HH07AT187         |              |              |              |              |              |              |              |              |
| Thermostat/Subbase—Auto °F                 | HH07AT186         |              |              |              |              |              |              |              |              |
| Thermostat/Subbase—Manual °C               | HH07AT189         |              |              |              |              |              |              |              |              |
| Thermostat/Subbase—Auto °C                 | HH07AT188         |              |              |              |              |              |              |              |              |
| Thermostat/Subbase-Night Setback           | HH07PE001         |              |              |              |              |              |              |              |              |

See notes on page 5.

# SPECIFICATIONS-690A

| SIZE   | 036-B             | 036-A        | 036-B        | 036-A      | 036-B      | 042-A        | 042-B        | 042-A        | 042-B        | 042-A      |
|--|-------------------|--------------|--------------|------------|------------|--------------|--------------|--------------|--------------|------------|
| OPERATING WT (lb)                            | 225               | 225          | 225          | 225        | 225        | 239          | 239          | 239          | 239          | 239        |
| ELECTRICAL                                   |                   |              |              |            |            |              |              |              |              |            |
| Unit Volts—Hertz—Phase                       | 208/230—60—1      | 208/230—60—3 | 208/230—60—3 | 460—60—3   | 460—60—3   | 208/230—60—1 | 208/230—60—1 | 208/230—60—3 | 208/230—60—3 | 460—60—3   |
| Operating Voltage Range†††                   | 187—253           | 187—253      | 187—253      | 414-506    | 414-506    | 187—253      | 187—253      | 187—253      | 187—253      | 414—506    |
| Unit Ampacity for Wire Sizing                | 26.7              | 17.1         | 17.6         | 9.1        | 8.3        | 27.8         | 33.0         | 21.1         | 20.0         | 10.6       |
| Min Wire Size (60°C/75°C Copper) (AWG)*      | 10/10             | 14/14        | 14/14        | 14/14      | 14/14      | 10/10        | 8/10         | 12/12        | 14/14        | 14/14      |
| Maximum Length (feet) (60°C/75°C)†††         | 70/70             | 38/38        | 37/37        | 142/142    | 150/150    | 68/68        | 89/56        | 47/47        | 37/37        | 123/123    |
| Max Branch Circuit Fuse Size (Amps)‡         | 40                | 25           | 30           | 15         | 15         | 45           | 50           | 35           | 30           | 15         |
| Compressor Rated Load Amps                   | 20.2              | 12.4         | 12.8         | 6.6        | 6.0        | 21.1         | 25.3         | 15.6         | 14.7         | 7.8        |
| Locked Rotor Amps                            | 93.0              | 79.5         | 74.0         | 39.8       | 41.0       | 127.0        | 110.0        | 98.5         | 92.0         | 49.3       |
| Fan Motor, HP & RPM                          | 1/4 & 1100        | 1/4 & 1100   | 1/4 & 1100   | 1/4 & 1100 | 1/4 & 1100 | 1/4 & 1100   | 1/4 & 1100   | 1/4 & 1100   | 1/4 & 1100   | 1/4 & 1100 |
| Full Load Amps                               | 1.4               | 1.6          | 1.6          | 0.8        | 0.8        | 1.4          | 1.4          | 1.6          | 1.6          | 0.8        |
| COMPRESSOR AND REFRIGERANT                   |                   |              |              |            |            |              |              |              |              |            |
| Compressor                                   | Hermetic          |              |              |            |            |              |              |              |              |            |
| Refrigerant Charge (lb)†                     | 6.75              | 6.78         | 6.75         | 6.78       | 6.75       | 8.06         | 7.50         | 8.06         | 7.50         | 8.06       |
| OUTDOOR COIL & FAN                           |                   |              |              |            |            |              |              |              |              |            |
| Coil Face Area (Sq Ft)                       | 15.00             | 15.00        | 15.00        | 15.00      | 15.00      | 15.00        | 15.00        | 15.00        | 15.00        | 15.00      |
| Airflow (CFM)                                | 3000              | 3000         | 3000         | 3000       | 3000       | 3000         | 3000         | 3000         | 3000         | 3000       |
| OPTIONAL EQUIPMENT                           |                   |              |              |            |            |              |              |              |              |            |
| Support Feet Kit—4-inch (4)                  | 313916-701        |              |              |            |            |              |              |              |              |            |
| Snow Rack                                    | 313072-701        |              |              |            |            |              |              |              |              |            |
| Indoor Time-Delay Relay                      | 313902-751        |              |              |            |            |              |              |              |              |            |
| Energy Minder                                | 941AHX000000 MCAA |              |              |            |            |              |              |              |              |            |
| Efficiency Alarm††                           | 313076-751        |              |              |            |            |              |              |              |              |            |
| Bypass Solenoid Valve—Defrost                | 314003-751        |              |              |            |            |              |              |              |              |            |
| Outdoor Thermostat                           | 313074-751        |              |              |            |            |              |              |              |              |            |
| Secondary Outdoor Thermostat                 | 313074-752        |              |              |            |            |              |              |              |              |            |
| COMPROTEC®                                   | 313966-751        |              |              |            |            |              |              |              |              |            |
| Crankcase Heater                             | Standard          |              |              |            |            |              |              |              |              |            |
| Compressor Start Assist                      | 313965-754        | N/A          |              |            |            | 313965-755   | 313965-765   | N/A          |              |            |
| Sound Blanket                                | 312994-751        |              |              |            |            | 314776-751   |              | 312994-751   | 314776-751   | 312994-751 |
| Bi-flow TXV (RPB)                            | 315175-755        |              |              |            |            |              |              |              |              |            |
| Bi-flow TXV (Hard Shutoff)***                | 315175-762        |              |              |            |            |              |              |              |              |            |
| Low-Pressure Switch                          | Standard          |              |              |            |            |              |              |              |              |            |
| High-Pressure Switch                         | 313079-751        | Standard     |              |            |            | 313079-751   |              | Standard     |              |            |
| Filter Drier—Bi-flow (New Construction)      | P504-8083S        |              |              |            |            |              |              |              |              |            |
| Filter Drier—Bi-flow (Add-on or Replacement) | P504-8163S        |              |              |            |            |              |              |              |              |            |
| Low-Ambient Controller‡‡                     | 316196-751        |              |              | 316196-752 |            |              | 316196-751   |              |              | 316196-752 |
| Low-Ambient Motor**                          | 316185-754        | Standard     |              |            |            | 316185-754   |              | Standard     |              |            |
| Evaporator Freeze Thermostat**               | 316584-751        |              |              |            |            |              |              |              |              |            |
| Isolation Relay**                            | 316586-751        |              |              |            |            |              |              |              |              |            |
| Liquid Solenoid Valve                        | 316556-752        |              |              |            |            |              |              |              |              |            |
| Thermostat/Subbase—Manual °F                 | HH07AT187         |              |              |            |            |              |              |              |              |            |
| Thermostat/Subbase—Auto °F                   | HH07AT186         |              |              |            |            |              |              |              |              |            |
| Thermostat/Subbase—Manual °C                 | HH07AT189         |              |              |            |            |              |              |              |              |            |
| Thermostat/Subbase—Auto °C                   | HH07AT188         |              |              |            |            |              |              |              |              |            |
| Thermostat/Subbase-Night Setback             | HH07PE001         |              |              |            |            |              |              |              |              |            |

See notes on page 5.

# SPECIFICATIONS-690A

| SIZE   | 042-B             | 048-B        | 048-D        | 048-B        | 048-D        | 048-B      | 048-D      | 060-A        | 060-A        | 060-A      |
|--|-------------------|--------------|--------------|--------------|--------------|------------|------------|--------------|--------------|------------|
| OPERATING WT (lb)                            | 239               | 270          | 286          | 270          | 282          | 270        | 282        | 290          | 290          | 290        |
| ELECTRICAL                                   |                   |              |              |              |              |            |            |              |              |            |
| Unit Volts—Hertz—Phase                       | 460—60—3          | 208/230—60—1 | 208/230—60—1 | 208/230—60—3 | 208/230—60—3 | 460—60—3   | 460—60—3   | 208/230—60—1 | 208/230—60—3 | 460—60—3   |
| Operating Voltage Range†††                   | 414-506           | 187—253      | 187—253      | 187—253      | 187—253      | 414—506    | 414—506    | 187—253      | 187—253      | 414-506    |
| Unit Ampacity for Wire Sizing                | 9.6               | 38.4         | 33.0         | 25.2         | 21.7         | 13.4       | 10.7       | 39.9         | 25.9         | 12.1       |
| Min Wire Size (60°C/75°C Copper) (AWG)*      | 14/14             | 8/8          | 8/10         | 10/10        | 12/12        | 14/14      | 14/14      | 8/8          | 10/10        | 14/14      |
| Maximum Length (feet) (60°C/75°C)†††         | 136/136           | 77/77        | 89/58        | 65/65        | 47/47        | 97/97      | 122/122    | 74/74        | 63/63        | 107/107    |
| Max Branch Circuit Fuse Size (Amps)‡         | 15                | 60           | 50           | 40           | 35           | 20         | 15         | 60           | 40           | 20         |
| Compressor Rated Load Amps                   | 7.0               | 29.6         | 25.3         | 18.9         | 16.1         | 10.1       | 7.9        | 30.8         | 19.4         | 9.0        |
| Locked Rotor Amps                            | 46.0              | 135.0        | 114.0        | 105.0        | 84.0         | 55.0       | 42.0       | 142.0        | 130.0        | 65.0       |
| Fan Motor, HP & RPM                          | 1/4 & 1100        | 1/4 & 1100   | 1/4 & 1100   | 1/4 & 1100   | 1/4 & 1100   | 1/4 & 1100 | 1/4 & 1100 | 1/4 & 1100   | 1/4 & 1100   | 1/4 & 1100 |
| Full Load Amps                               | 0.8               | 1.4          | 1.4          | 1.6          | 1.6          | 0.8        | 0.8        | 1.4          | 1.6          | 0.8        |
| COMPRESSOR AND REFRIGERANT                   |                   |              |              |              |              |            |            |              |              |            |
| Compressor                                   | Hermetic          |              |              |              |              |            |            |              |              |            |
| Refrigerant Charge (lb)†                     | 7.50              | 11.33        | 10.94        | 11.33        | 10.94        | 11.33      | 10.94      | 13.75        | 13.75        | 13.75      |
| OUTDOOR COIL & FAN                           |                   |              |              |              |              |            |            |              |              |            |
| Coil Face Area (Sq Ft)                       | 15.00             | 15.00        | 18.00        | 15.00        | 18.00        | 15.00      | 18.00      | 18.00        | 18.00        | 18.00      |
| Airflow (CFM)                                | 3000              | 3000         | 3000         | 3000         | 3000         | 3000       | 3000       | 3000         | 3000         | 3000       |
| OPTIONAL EQUIPMENT                           |                   |              |              |              |              |            |            |              |              |            |
| Support Feet Kit—4-inch (4)                  | 313916-701        |              |              |              |              |            |            |              |              |            |
| Snow Rack                                    | 313072-701        |              |              |              |              |            |            |              |              |            |
| Indoor Time-Delay Relay                      | 313902-751        |              |              |              |              |            |            |              |              |            |
| Energy Minder                                | 941AHX000000 MCAA |              |              |              |              |            |            |              |              |            |
| Efficiency Alarm††                           | 313076-751        |              |              |              |              |            |            |              |              |            |
| Bypass Solenoid Valve—Defrost                | 314003-751        |              |              |              |              |            |            |              |              |            |
| Outdoor Thermostat                           | 313074-751        |              |              |              |              |            |            |              |              |            |
| Secondary Outdoor Thermostat                 | 313074-752        |              |              |              |              |            |            |              |              |            |
| COMPROTEC®                                   | 313966-751        |              |              |              |              |            |            |              |              |            |
| Crankcase Heater                             | Standard          |              |              |              |              |            |            |              |              |            |
| Compressor Start Assist                      | N/A               | 313965-754   | 313965-764   | N/A          |              |            |            | 313965-760   | N/A          |            |
| Sound Blanket                                | 314766-751        | 312997-751   |              |              |              |            |            |              |              |            |
| Bi-flow TXV (RPB)                            | 315175-755        | 315175-756   |              |              |              |            |            | 315175-757   |              |            |
| Bi-flow TXV (Hard Shutoff)***                | 315175-762        | 315175-763   |              |              |              |            |            | 315175-764   |              |            |
| Low-Pressure Switch                          | Standard          |              |              |              |              |            |            |              |              |            |
| High-Pressure Switch                         | Standard          | 313079-751   |              |              | Standard     |            |            | 313079-751   | Standard     |            |
| Filter Drier—Bi-flow (New Construction)      | P504-8083S        |              |              |              |              |            |            |              |              |            |
| Filter Drier—Bi-flow (Add-on or Replacement) | P504-8163S        |              |              |              |              |            |            |              |              |            |
| Low-Ambient Controller‡‡                     | 316196-752        | 316196-751   |              |              |              | 316196-752 |            | 316196-751   |              | 316196-752 |
| Low-Ambient Motor**                          | Standard          | 316185-754   |              |              | Standard     |            |            | 316185-754   | Standard     |            |
| Evaporator Freeze Thermostat**               | 316584-751        |              |              |              |              |            |            |              |              |            |
| Isolation Relay**                            | 316586-751        |              |              |              |              |            |            |              |              |            |
| Liquid Solenoid Valve                        | 316556-752        |              |              |              |              |            |            |              |              |            |
| Thermostat/Subbase—Manual °F                 | HH07AT187         |              |              |              |              |            |            |              |              |            |
| Thermostat/Subbase—Auto °F                   | HH07AT186         |              |              |              |              |            |            |              |              |            |
| Thermostat/Subbase—Manual °C                 | HH07AT189         |              |              |              |              |            |            |              |              |            |
| Thermostat/Subbase—Auto °C                   | HH07AT188         |              |              |              |              |            |            |              |              |            |
| Thermostat/Subbase-Night Setback             | HH07PE001         |              |              |              |              |            |            |              |              |            |

\*The ampacity of non-metallic (NM) sheathed cable shall be that of 60°C (140°F) conductors per NEC 1990, article 336-26. If wire used is not as specified in chart, refer to applicable tables available in 1990 NEC.

†The factory refrigerant charge is sufficient for systems requiring up to 25 feet of interconnecting tubing. For tubing lengths other than 25 feet, see Installation Instructions for additional refrigerant requirements.

‡Time delay fuse. Single-phase units may use fuses or HACR-type circuit breakers (U.S. only) of same size as noted.

\*\*Consult Low-Ambient Installation Instructions for application.

††For indicator light function, specified thermostat must be used.

‡‡Low-Ambient motor required for all single-phase units.

\*\*\*Requires Start Kit (capacitor & relay).

†††Permissible limits of the voltage range at which the unit will operate satisfactorily. Operation outside these limits may result in unit failure.

‡‡‡Length shown is as measured one way along wire path between unit and service panel for a maximum 2% voltage drop.

N/A = Not applicable in this application.

NOTES: All motors/compressors contain internal overload protection.

Copper wire must be used from service disconnect to unit.

# COMBINATION RATINGS

| OUTDOOR UNIT     | APPROVED INDOOR UNIT | ARI STANDARD RATINGS* (1-Ph and 3-Ph) |        |              |                 |          |           |        |          |        |                          | Sound Rating (Bels) |
|------------------|----------------------|---------------------------------------|--------|--------------|-----------------|----------|-----------|--------|----------|--------|--------------------------|---------------------|
|                  |                      | CFM                                   | TC     | Cooling      |                 | EER 3-ph | Heating   |        |          |        | Seasonal Efficiency HSPF |                     |
|                  |                      |                                       |        | With FDR.90‡ | Without FDR.90‡ |          | High Temp |        | Low Temp |        |                          |                     |
|                  |                      |                                       |        |              |                 |          | TC        | COP    | TC       | COP    |                          |                     |
| 690A018-A        | 519DS/509AS018       | 675                                   | 17,000 | 8.20         | 8.00            | —        | 17,600    | 2.56   | 9,700    | 1.76   | 5.80                     | 7.8                 |
|                  | 519DS/509AS019       | 675                                   | 17,700 | 8.50         | 8.20            | —        | 18,100    | 2.68   | 9,900    | 1.80   | 6.10                     | 7.8                 |
|                  | 519E018              | 675                                   | 17,000 | 8.20         | 8.00            | —        | 17,600    | 2.56   | 9,700    | 1.76   | 5.80                     | 7.8                 |
|                  | 519DS/509AS024       | 675                                   | 17,700 | 8.50         | 8.20            | —        | 18,100    | 2.68   | 9,900    | 1.80   | 6.10                     | 7.8                 |
|                  | 519E024              | 675                                   | 17,700 | 8.50         | 8.20            | —        | 18,100    | 2.68   | 9,900    | 1.80   | 6.10                     | 7.8                 |
|                  | 508A024              | 675                                   | 17,600 | 8.50         | 8.20            | —        | 18,200    | 2.68   | 9,900    | 1.80   | 6.00                     | 7.8                 |
|                  | 510B024              | 675                                   | 17,300 | 8.20         | 8.00            | —        | 18,300    | 2.74   | 9,900    | 1.82   | 6.10                     | 7.8                 |
|                  | 517EN018             | 675                                   | 16,600 | 8.00         | 7.70            | —        | 18,100    | 2.62   | 9,900    | 1.76   | 6.00                     | 7.8                 |
|                  | 513C018              | 675                                   | 16,800 | 7.80         | 7.60            | —        | 17,800    | 2.52   | 9,900    | 1.72   | 5.80                     | 7.8                 |
|                  | 516A018              | 675                                   | 17,200 | 8.50         | 8.20            | —        | 17,900    | 2.72   | 9,700    | 1.80   | 6.10                     | 7.8                 |
|                  | 517EN024†            | 675                                   | 17,200 | 8.20         | 8.00            | —        | 18,400    | 2.72   | 10,000   | 1.80   | 6.20                     | 7.8                 |
|                  | 517EN025             | 675                                   | 17,900 | 8.50         | 8.20            | —        | 18,500    | 2.80   | 10,100   | 1.80   | 6.30                     | 7.8                 |
|                  | 513C024              | 675                                   | 17,200 | 8.20         | 8.00            | —        | 18,000    | 2.66   | 9,900    | 1.80   | 6.00                     | 7.8                 |
|                  | 516A024              | 675                                   | 17,400 | 8.50         | 8.30            | —        | 18,200    | 2.72   | 10,000   | 1.80   | 6.20                     | 7.8                 |
|                  | 617ANA/ANU018        | 675                                   | 17,500 | 8.50         | 8.20            | —        | 18,000    | 2.78   | 10,500   | 1.86   | 6.50                     | 7.8                 |
|                  | 617ANA/ANU024        | 675                                   | 18,000 | 8.70         | 8.40            | —        | 18,300    | 2.86   | 10,600   | 1.88   | 6.50                     | 7.8                 |
| 690A018-B        | 519DS/509AS018       | 675                                   | 17,400 | 8.80         | 8.30            | —        | 18,100    | 2.68   | 11,100   | 1.90   | 6.30                     | 7.8                 |
|                  | 519DS/509AS019       | 675                                   | 18,200 | 9.00         | 8.60            | —        | 18,500    | 2.80   | 11,300   | 1.96   | 6.50                     | 7.8                 |
|                  | 519E018              | 675                                   | 17,400 | 8.80         | 8.30            | —        | 18,100    | 2.68   | 11,100   | 1.90   | 6.30                     | 7.8                 |
|                  | 519DS/509AS024       | 675                                   | 18,200 | 9.00         | 8.60            | —        | 18,500    | 2.80   | 11,300   | 1.96   | 6.50                     | 7.8                 |
|                  | 519E024              | 675                                   | 18,200 | 9.00         | 8.60            | —        | 18,500    | 2.80   | 11,300   | 1.96   | 6.50                     | 7.8                 |
|                  | 508A024              | 675                                   | 18,000 | 9.00         | 8.50            | —        | 18,500    | 2.80   | 11,300   | 1.96   | 6.50                     | 7.8                 |
|                  | 617ANA/ANU024        | 675                                   | 18,200 | 9.10         | 8.60            | —        | 18,800    | 2.92   | 11,300   | 2.00   | 6.80                     | 7.8                 |
|                  | 517EN018             | 675                                   | 17,000 | 8.50         | 8.00            | —        | 18,700    | 2.76   | 11,300   | 1.90   | 6.40                     | 7.8                 |
|                  | 513C018              | 675                                   | 17,000 | 8.40         | 8.00            | —        | 18,300    | 2.62   | 11,300   | 1.86   | 6.20                     | 7.8                 |
|                  | 516A018              | 675                                   | 18,200 | 9.00         | 8.60            | —        | 18,300    | 2.84   | 11,100   | 2.00   | 6.60                     | 7.8                 |
|                  | 617ANA/ANU018†       | 675                                   | 17,800 | 9.00         | 8.50            | —        | 18,500    | 2.84   | 11,200   | 1.96   | 6.60                     | 7.8                 |
|                  | 517EN025             | 675                                   | 18,000 | 8.70         | 8.20            | —        | 18,800    | 2.90   | 11,000   | 1.86   | 6.50                     | 7.8                 |
|                  | 513C024              | 675                                   | 17,800 | 8.70         | 8.40            | —        | 18,500    | 2.76   | 11,300   | 1.94   | 6.40                     | 7.8                 |
|                  | 516A024              | 675                                   | 18,200 | 9.00         | 8.50            | —        | 18,600    | 2.84   | 11,300   | 1.96   | 6.60                     | 7.8                 |
|                  | 517EN024             | 675                                   | 17,500 | 8.70         | 8.20            | —        | 18,900    | 2.86   | 11,400   | 1.96   | 6.50                     | 7.8                 |
|                  | 690A024-A            | 519DS/509AS024                        | 900    | 22,800       | 8.30            | 8.00     | —         | 24,400 | 2.74     | 14,100 | 2.00                     | 6.40                |
| 519DS/509AS025   |                      | 900                                   | 23,200 | 8.40         | 8.10            | —        | 24,200    | 2.76   | 14,200   | 2.00   | 6.40                     | 7.6                 |
| 519E024          |                      | 900                                   | 22,800 | 8.30         | 8.00            | —        | 24,400    | 2.74   | 14,100   | 1.98   | 6.40                     | 7.6                 |
| 508A024          |                      | 900                                   | 22,600 | 8.30         | 8.00            | —        | 24,000    | 2.70   | 14,100   | 2.00   | 6.30                     | 7.6                 |
| 510B024          |                      | 900                                   | 21,400 | 8.00         | 7.80            | —        | 24,400    | 2.80   | 14,200   | 2.00   | 6.40                     | 7.6                 |
| 519DS/509AS030B  |                      | 900                                   | 23,800 | 8.50         | 8.20            | —        | 24,600    | 2.84   | 14,400   | 2.04   | 6.60                     | 7.6                 |
| 519DS/509AS0430W |                      | 900                                   | 23,800 | 8.50         | 8.20            | —        | 24,600    | 2.84   | 14,400   | 2.04   | 6.60                     | 7.6                 |
| 519E030          |                      | 900                                   | 23,800 | 8.50         | 8.20            | —        | 24,600    | 2.84   | 14,400   | 2.04   | 6.60                     | 7.6                 |
| 506B030          |                      | 900                                   | 23,200 | 8.30         | 8.00            | —        | 24,000    | 2.78   | 14,200   | 2.00   | 6.40                     | 7.6                 |
| 517EN024         |                      | 850                                   | 21,400 | 7.90         | 7.70            | —        | 24,400    | 2.76   | 14,200   | 1.98   | 6.30                     | 7.6                 |
| 517EN025         |                      | 850                                   | 22,000 | 8.00         | 7.80            | —        | 24,600    | 2.84   | 14,200   | 2.00   | 6.50                     | 7.6                 |
| 513C024          |                      | 900                                   | 22,000 | 8.00         | 7.70            | —        | 23,800    | 2.70   | 14,100   | 1.98   | 6.30                     | 7.6                 |
| 516A024          |                      | 900                                   | 23,000 | 8.30         | 8.00            | —        | 24,400    | 2.78   | 14,200   | 2.00   | 6.40                     | 7.6                 |
| 517EN030†        |                      | 900                                   | 23,200 | 8.30         | 8.00            | —        | 24,600    | 2.80   | 14,300   | 2.00   | 6.60                     | 7.6                 |
| 517EN031         |                      | 900                                   | 24,000 | 8.50         | 8.20            | —        | 24,800    | 2.94   | 14,400   | 2.06   | 6.70                     | 7.6                 |
| 513C030          |                      | 900                                   | 23,000 | 8.00         | 7.80            | —        | 24,400    | 2.78   | 14,500   | 2.00   | 6.40                     | 7.6                 |
| 516A030          | 900                  | 23,400                                | 8.30   | 8.00         | —               | 24,600   | 2.78      | 14,500 | 2.00     | 6.40   | 7.6                      |                     |
| 617ANA/ANU018**  | 650                  | 22,000                                | —      | 8.00         | —               | 23,000   | 2.84      | 14,000 | 2.06     | 6.40   | 7.6                      |                     |
| 617ANA/ANU024    | 900                  | 23,400                                | 9.00   | 8.50         | —               | 24,000   | 2.94      | 14,200 | 2.10     | 6.60   | 7.6                      |                     |
| 617ANA/ANU030    | 900                  | 24,000                                | 9.00   | 8.50         | —               | 24,200   | 2.96      | 14,400 | 2.10     | 6.60   | 7.6                      |                     |
| 690A030-A        | 519DS/509AS030B      | 1000                                  | 28,600 | 8.50         | 8.20            | 7.55     | 29,600    | 2.78   | 18,200   | 2.10   | 6.60                     | 8.0                 |
|                  | 519DS/509AS030W      | 1000                                  | 28,600 | 8.50         | 8.20            | 7.55     | 29,600    | 2.78   | 18,200   | 2.10   | 6.60                     | 8.0                 |
|                  | 519E030              | 1000                                  | 28,600 | 8.50         | 8.20            | 7.55     | 29,600    | 2.78   | 18,200   | 2.10   | 6.60                     | 8.0                 |
|                  | 506B030              | 1125                                  | 28,000 | 8.30         | 8.00            | 7.35     | 29,600    | 2.74   | 18,300   | 2.10   | 6.40                     | 8.0                 |
|                  | 519CS036             | 1125                                  | 28,800 | 8.40         | 8.10            | 7.45     | 30,200    | 2.86   | 18,500   | 2.14   | 6.60                     | 8.0                 |
|                  | 519DS/509AS036B      | 1125                                  | 29,200 | 8.50         | 8.20            | 7.50     | 30,200    | 2.86   | 18,600   | 2.16   | 6.70                     | 8.0                 |
|                  | 519DS036WB           | 1125                                  | 29,200 | 8.50         | 8.20            | 7.50     | 30,200    | 2.86   | 18,600   | 2.16   | 6.70                     | 8.0                 |
|                  | 519E036              | 1125                                  | 29,200 | 8.50         | 8.20            | 7.50     | 30,200    | 2.86   | 18,600   | 2.16   | 6.70                     | 8.0                 |
|                  | 508A036              | 1125                                  | 28,200 | 8.40         | 8.10            | 7.40     | 29,600    | 2.74   | 18,300   | 2.10   | 6.50                     | 8.0                 |
|                  | 506B036              | 1125                                  | 29,000 | 8.40         | 8.10            | 7.40     | 30,200    | 2.86   | 18,600   | 2.16   | 6.60                     | 8.0                 |
|                  | 510B036              | 1125                                  | 28,600 | 8.40         | 8.10            | 7.40     | 30,000    | 2.84   | 18,500   | 2.10   | 6.60                     | 8.0                 |
|                  | 517EN030             | 1100                                  | 27,600 | 8.30         | 8.00            | 7.30     | 30,000    | 2.76   | 18,400   | 2.08   | 6.40                     | 8.0                 |
|                  | 517EN031             | 1100                                  | 29,000 | 8.50         | 8.10            | 7.40     | 30,400    | 2.90   | 18,600   | 2.14   | 6.60                     | 8.0                 |
|                  | 513C030              | 1015                                  | 28,000 | 8.20         | 8.00            | 7.35     | 29,800    | 2.74   | 18,400   | 2.08   | 6.40                     | 8.0                 |
|                  | 516A030              | 1125                                  | 28,400 | 8.30         | 8.00            | 7.35     | 30,000    | 2.76   | 18,600   | 2.08   | 6.50                     | 8.0                 |
|                  | 517EN036†            | 1125                                  | 28,600 | 8.30         | 8.00            | 7.40     | 30,000    | 2.80   | 18,200   | 2.10   | 6.60                     | 8.0                 |
| 617ANA/ANU030    | 1125                 | 29,000                                | 8.65   | 8.30         | 7.85            | 30,000   | 2.86      | 18,400 | 2.14     | 6.60   | 8.0                      |                     |
| 617ANA/ANU036    | 1125                 | 29,000                                | 8.50   | 8.20         | 7.65            | 31,000   | 2.88      | 18,600 | 2.14     | 6.70   | 8.0                      |                     |
| 690A030-B        | 519DS/509AS030B      | 1000                                  | 28,600 | 8.50         | 8.20            | 7.45     | 30,000    | 3.16   | 19,300   | 2.22   | 6.80                     | 7.8                 |
|                  | 519E030              | 1000                                  | 29,600 | 8.50         | 8.20            | 7.45     | 30,000    | 3.16   | 19,300   | 2.22   | 6.80                     | 7.8                 |
|                  | 506B030              | 1125                                  | 28,000 | 8.30         | 8.00            | 7.25     | 30,000    | 3.10   | 19,400   | 2.18   | 6.70                     | 7.8                 |
|                  | 519CS036             | 1125                                  | 29,200 | 8.40         | 8.10            | 7.35     | 30,400    | 3.24   | 19,600   | 2.22   | 6.90                     | 7.8                 |
|                  | 519DS/509AS036       | 1125                                  | 29,400 | 8.50         | 8.20            | 7.45     | 30,400    | 3.24   | 19,700   | 2.26   | 6.90                     | 7.8                 |
|                  | 519E036              | 1125                                  | 30,000 | 8.50         | 8.20            | 7.45     | 30,400    | 3.24   | 19,700   | 2.26   | 6.90                     | 7.8                 |
|                  | 508A036              | 1125                                  | 28,400 | 8.30         | 8.00            | 7.25     | 30,000    | 3.10   | 19,400   | 2.18   | 6.70                     | 7.8                 |
|                  | 506B036              | 1125                                  | 29,000 | 8.40         | 8.10            | 7.35     | 30,400    | 3.24   | 19,700   | 2.24   | 6.90                     | 7.8                 |
|                  | 510B036              | 1125                                  | 29,400 | 8.30         | 8.00            | 7.25     | 30,200    | 3.22   | 19,600   | 2.22   | 6.80                     | 7.8                 |
|                  | 517EN030             | 1100                                  | 28,200 | 8.30         | 8.00            | 7.25     | 30,000    | 3.16   | 19,400   | 2.16   | 6.60                     | 7.8                 |
|                  | 517EN031             | 1100                                  | 30,000 | 8.40         | 8.10            | 7.35     | 30,600    | 3.28   | 19,800   | 2.24   | 6.90                     | 7.8                 |
|                  | 513C030              | 1015                                  | 27,600 | 8.30         | 8.00            | 7.25     | 29,800    | 3.10   | 19,500   | 2.16   | 6.70                     | 7.8                 |
|                  | 516A030              | 1125                                  | 28,000 | 8.30         | 8.00            | 7.30     | 30,200    | 3.12   | 19,700   | 2.18   | 6.60                     | 7.8                 |
|                  | 617ANA/ANU030†       | 1125                                  | 29,000 | 8.30         | 8.00            | 7.40     | 30,000    | 2.98   | 19,000   | 2.12   | 6.80                     | 7.8                 |
|                  | 517EN036             | 1125                                  | 29,000 | 8.30         | 8.00            | 7.30     | 30,400    | 3.18   | 19,800   | 2.18   | 6.80                     | 7.8                 |
|                  | 617ANA/ANU036        | 1125                                  | 28,800 | 8.30         | 8.00            | 7.25     | 30,000    | 3.06   | 19,500   | 2.14   | 6.80                     | 7.8                 |

See notes on page 8.



# COMBINATION RATINGS Continued

| OUTDOOR UNIT | APPROVED INDOOR UNIT | ARI STANDARD RATINGS* (1-Ph and 3-Ph) |        |                     |                 |          |           |      |          |      |                          |                     |  |  |  |
|--------------|----------------------|---------------------------------------|--------|---------------------|-----------------|----------|-----------|------|----------|------|--------------------------|---------------------|--|--|--|
|              |                      | CFM                                   | TC     | Cooling             |                 | EER 3-ph | Heating   |      |          |      | Seasonal Efficiency HSPF | Sound Rating (Bels) |  |  |  |
|              |                      |                                       |        | Seasonal Efficiency |                 |          | High Temp |      | Low Temp |      |                          |                     |  |  |  |
|              |                      |                                       |        | With FDR.90†        | Without FDR.90† |          | TC        | COP  | TC       | COP  |                          |                     |  |  |  |
| 690A031-A    | 519DS030B            | 1000                                  | 28,600 | 8.80                | 8.30            | 8.40     | 31,000    | 3.02 | 19,200   | 2.28 | 7.00                     | 7.6                 |  |  |  |
|              | 519E030              | 1000                                  | 28,600 | 8.80                | 8.30            | 8.40     | 31,000    | 3.02 | 19,200   | 2.28 | 7.00                     | 7.6                 |  |  |  |
|              | 506B030              | 1125                                  | 28,000 | 8.50                | 8.00            | 8.05     | 31,000    | 2.98 | 19,400   | 2.24 | 6.90                     | 7.6                 |  |  |  |
|              | 519DS/509AS036B      | 1125                                  | 29,400 | 8.80                | 8.30            | 8.40     | 32,000    | 3.10 | 19,700   | 2.30 | 7.00                     | 7.6                 |  |  |  |
|              | 519E036              | 1125                                  | 29,400 | 8.80                | 8.30            | 8.40     | 32,000    | 3.10 | 19,700   | 2.30 | 7.00                     | 7.6                 |  |  |  |
|              | 508A036              | 1125                                  | 28,200 | 8.60                | 8.10            | 8.15     | 31,000    | 2.98 | 19,400   | 2.26 | 6.90                     | 7.6                 |  |  |  |
|              | 506B036              | 1125                                  | 29,000 | 8.80                | 8.30            | 8.40     | 31,800    | 3.10 | 19,600   | 2.30 | 7.00                     | 7.6                 |  |  |  |
|              | 517EN030             | 1100                                  | 27,600 | 8.50                | 8.00            | 8.05     | 31,600    | 2.98 | 19,400   | 2.22 | 6.90                     | 7.6                 |  |  |  |
|              | 517EN031             | 1100                                  | 29,200 | 8.70                | 8.20            | 8.30     | 32,000    | 3.14 | 19,700   | 2.28 | 7.00                     | 7.6                 |  |  |  |
|              | 513C030              | 1015                                  | 28,000 | 8.50                | 8.00            | 8.05     | 31,200    | 2.96 | 19,500   | 2.22 | 6.80                     | 7.6                 |  |  |  |
|              | 516A030              | 1125                                  | 28,400 | 8.50                | 8.00            | 8.10     | 31,800    | 3.00 | 19,700   | 2.24 | 6.90                     | 7.6                 |  |  |  |
|              | 617ANA/ANU024**      | 840                                   | 28,000 | —                   | 8.10            | —        | 30,400    | 2.94 | 18,900   | 2.22 | 6.80                     | 7.6                 |  |  |  |
|              | 617ANA/ANU030†       | 1125                                  | 29,600 | 9.00                | 8.70            | 8.60     | 31,000    | 3.02 | 19,000   | 2.26 | 7.00                     | 7.6                 |  |  |  |
|              | 517EN036             | 1125                                  | 28,400 | 8.50                | 8.00            | 8.10     | 32,000    | 3.04 | 19,700   | 2.24 | 7.00                     | 7.6                 |  |  |  |
|              | 617ANA/ANU036        | 1125                                  | 28,800 | 8.60                | 8.10            | 8.30     | 31,600    | 3.04 | 19,600   | 2.26 | 7.00                     | 7.6                 |  |  |  |
| 690A036-A    | 519CS036             | 1250                                  | 34,600 | 8.50                | 8.20            | 7.55     | 36,400    | 2.68 | 22,600   | 2.06 | 6.50                     | 8.4                 |  |  |  |
|              | 519DS/509AS036B      | 1200                                  | 35,200 | 8.70                | 8.50            | 7.80     | 36,400    | 2.68 | 22,600   | 2.08 | 6.60                     | 8.4                 |  |  |  |
|              | 519DS036WB           | 1200                                  | 35,200 | 8.70                | 8.50            | 7.80     | 36,400    | 2.68 | 22,600   | 2.08 | 6.60                     | 8.4                 |  |  |  |
|              | 519E036              | 1200                                  | 35,200 | 8.70                | 8.50            | 7.80     | 36,400    | 2.68 | 22,600   | 2.08 | 6.60                     | 8.4                 |  |  |  |
|              | 508A036              | 1300                                  | 34,200 | 8.50                | 8.20            | 7.55     | 36,000    | 2.58 | 22,600   | 2.00 | 6.30                     | 8.4                 |  |  |  |
|              | 506B036              | 1350                                  | 35,200 | 8.60                | 8.30            | 7.60     | 36,800    | 2.70 | 23,000   | 2.08 | 6.40                     | 8.4                 |  |  |  |
|              | 510B036              | 1350                                  | 34,800 | 8.50                | 8.20            | 7.55     | 36,800    | 2.68 | 22,800   | 2.06 | 6.50                     | 8.4                 |  |  |  |
|              | 519CS042             | 1350                                  | 35,600 | 8.60                | 8.30            | 7.60     | 37,000    | 2.74 | 23,000   | 2.08 | 6.60                     | 8.4                 |  |  |  |
|              | 519DS/509AS042       | 1350                                  | 35,200 | 8.60                | 8.30            | 7.65     | 36,800    | 2.68 | 23,000   | 2.08 | 6.60                     | 8.4                 |  |  |  |
|              | 519DS/509AS042W      | 1350                                  | 35,200 | 8.60                | 8.30            | 7.65     | 36,800    | 2.68 | 23,000   | 2.08 | 6.60                     | 8.4                 |  |  |  |
|              | 519DS/509AS043       | 1350                                  | 36,400 | 8.80                | 8.50            | 7.80     | 36,800    | 2.80 | 23,000   | 2.10 | 6.70                     | 8.4                 |  |  |  |
|              | 519DS/509AS043W      | 1350                                  | 36,400 | 8.80                | 8.50            | 7.80     | 36,800    | 2.78 | 23,000   | 2.10 | 6.70                     | 8.4                 |  |  |  |
|              | 519DS/509AS042C      | 1350                                  | 36,000 | 8.80                | 8.50            | 7.80     | 36,600    | 2.70 | 22,800   | 2.10 | 6.60                     | 8.4                 |  |  |  |
|              | 519E042              | 1350                                  | 35,200 | 8.60                | 8.30            | 7.65     | 36,800    | 2.68 | 23,000   | 2.08 | 6.60                     | 8.4                 |  |  |  |
|              | 506B042              | 1350                                  | 35,600 | 8.60                | 8.30            | 7.65     | 36,800    | 2.68 | 23,000   | 2.08 | 6.50                     | 8.4                 |  |  |  |
|              | 517EN036             | 1350                                  | 34,400 | 8.30                | 8.00            | 7.40     | 37,000    | 2.64 | 23,000   | 2.00 | 6.50                     | 8.4                 |  |  |  |
|              | 517E/GNS042†         | 1350                                  | 36,000 | 8.50                | 8.20            | 7.60     | 38,000    | 2.76 | 23,600   | 2.08 | 6.70                     | 8.4                 |  |  |  |
|              | 517E/GNS043          | 1350                                  | 36,400 | 8.60                | 8.30            | 7.65     | 38,000    | 2.78 | 23,400   | 2.10 | 6.70                     | 8.4                 |  |  |  |
|              | 617ANA/ANU036        | 1350                                  | 35,000 | 8.65                | 8.10            | 7.30     | 37,000    | 2.66 | 22,800   | 2.06 | 6.55                     | 8.4                 |  |  |  |
|              | 617ANA/ANU/ANM042    | 1350                                  | 36,400 | 8.90                | 8.50            | 7.90     | 36,800    | 2.66 | 22,800   | 2.06 | 6.55                     | 8.4                 |  |  |  |
| 690A036-B    | 519CS036             | 1250                                  | 34,400 | 8.70                | 8.30            | 8.25     | 35,000    | 2.90 | 20,800   | 2.00 | 6.60                     | 7.8                 |  |  |  |
|              | 519DS/509AS036B      | 1200                                  | 35,000 | 8.80                | 8.40            | 8.35     | 35,000    | 2.90 | 20,800   | 2.02 | 6.60                     | 7.8                 |  |  |  |
|              | 519E036              | 1200                                  | 35,000 | 8.80                | 8.40            | 8.35     | 35,000    | 2.90 | 20,800   | 2.02 | 6.60                     | 7.8                 |  |  |  |
|              | 508A036              | 1300                                  | 34,000 | 8.50                | 8.10            | 8.05     | 34,000    | 2.80 | 20,600   | 1.96 | 6.50                     | 7.8                 |  |  |  |
|              | 506B036              | 1350                                  | 35,200 | 8.70                | 8.30            | 8.25     | 35,600    | 2.92 | 21,200   | 2.02 | 6.70                     | 7.8                 |  |  |  |
|              | 510B036              | 1350                                  | 34,600 | 8.60                | 8.20            | 8.15     | 35,600    | 2.90 | 21,000   | 1.98 | 6.60                     | 7.8                 |  |  |  |
|              | 519CS042             | 1350                                  | 35,400 | 8.80                | 8.40            | 8.35     | 36,000    | 2.96 | 21,200   | 2.02 | 6.90                     | 7.8                 |  |  |  |
|              | 519DS/509AS042       | 1350                                  | 35,200 | 8.70                | 8.30            | 7.65     | 35,600    | 2.92 | 21,200   | 2.02 | 6.70                     | 7.8                 |  |  |  |
|              | 519DS/509AS042W      | 1350                                  | 35,200 | 8.70                | 8.30            | 7.65     | 35,600    | 2.92 | 21,200   | 2.02 | 6.70                     | 7.8                 |  |  |  |
|              | 519DS/509AS043       | 1350                                  | 36,000 | 8.90                | 8.50            | 8.45     | 36,800    | 3.02 | 21,200   | 2.06 | 6.80                     | 7.8                 |  |  |  |
|              | 519DS/509AS043W      | 1350                                  | 36,000 | 8.90                | 8.50            | 8.45     | 36,800    | 3.02 | 21,200   | 2.06 | 6.80                     | 7.8                 |  |  |  |
|              | 519DS/509AS042C      | 1350                                  | 35,800 | 8.80                | 8.40            | 8.35     | 35,400    | 2.94 | 21,000   | 2.04 | 6.70                     | 7.8                 |  |  |  |
|              | 519E042              | 1350                                  | 35,200 | 8.70                | 8.30            | 7.65     | 35,600    | 2.92 | 21,200   | 2.02 | 6.90                     | 7.8                 |  |  |  |
|              | 506B042              | 1350                                  | 35,200 | 8.60                | 8.20            | 8.15     | 35,600    | 2.92 | 21,200   | 2.02 | 6.60                     | 7.8                 |  |  |  |
|              | 517EN036             | 1350                                  | 34,400 | 8.40                | 8.00            | 8.00     | 35,800    | 2.86 | 21,200   | 1.96 | 6.60                     | 7.8                 |  |  |  |
|              | 617ANA/ANU/ANM042†   | 1350                                  | 35,400 | 9.00                | 8.20            | 8.50     | 35,800    | 2.88 | 21,000   | 2.02 | 7.00                     | 7.8                 |  |  |  |
|              | 517E/GNS043          | 1350                                  | 35,800 | 8.60                | 8.20            | 8.15     | 36,400    | 3.00 | 21,800   | 2.02 | 6.80                     | 7.8                 |  |  |  |
|              | 617ANA/ANM030**      | 1075                                  | 34,000 | —                   | 8.00            | 8.00     | 34,800    | 2.80 | 20,400   | 2.00 | 6.60                     | 7.8                 |  |  |  |
|              | 617ANA/ANU036        | 1350                                  | 34,800 | 8.50                | 8.10            | 7.90     | 35,200    | 2.88 | 21,000   | 1.98 | 6.70                     | 7.8                 |  |  |  |
|              | 517E/GNS042          | 1350                                  | 35,600 | 8.60                | 8.20            | 8.00     | 36,600    | 2.98 | 21,800   | 2.02 | 6.80                     | 7.8                 |  |  |  |
| 690A042-A    | 519CS042             | 1500                                  | 40,000 | 8.30                | 8.00            | 7.50     | 41,500    | 2.70 | 25,400   | 2.06 | 6.50                     | 8.0                 |  |  |  |
|              | 519DS/509AS042       | 1550                                  | 40,000 | 8.50                | 8.10            | 7.60     | 41,500    | 2.68 | 25,400   | 2.06 | 6.50                     | 8.0                 |  |  |  |
|              | 519DS/509AS042W      | 1550                                  | 39,500 | 8.50                | 8.10            | 7.60     | 41,500    | 2.66 | 25,400   | 2.06 | 6.45                     | 8.0                 |  |  |  |
|              | 519DS/509AS043       | 1575                                  | 41,500 | 8.60                | 8.30            | 7.80     | 42,000    | 2.78 | 25,600   | 2.10 | 6.60                     | 8.0                 |  |  |  |
|              | 519DS/509AS043W      | 1575                                  | 41,500 | 8.60                | 8.30            | 7.75     | 42,000    | 2.76 | 25,600   | 2.10 | 6.60                     | 8.0                 |  |  |  |
|              | 519DS/509AS042C      | 1500                                  | 41,000 | 8.50                | 8.30            | 7.75     | 41,000    | 2.68 | 25,200   | 2.06 | 6.50                     | 8.0                 |  |  |  |
|              | 519E042              | 1550                                  | 40,000 | 8.50                | 8.10            | 7.60     | 41,500    | 2.68 | 25,400   | 2.06 | 6.50                     | 8.0                 |  |  |  |
|              | 506B042              | 1575                                  | 39,000 | 8.30                | 8.00            | 7.55     | 41,000    | 2.56 | 25,200   | 2.00 | 6.20                     | 8.0                 |  |  |  |
|              | 519CS048             | 1500                                  | 39,500 | 8.40                | 8.10            | 7.60     | 42,000    | 2.70 | 25,400   | 2.06 | 6.50                     | 8.0                 |  |  |  |
|              | 519DS048             | 1575                                  | 40,500 | 8.50                | 8.20            | 7.65     | 42,500    | 2.78 | 25,800   | 2.10 | 6.60                     | 8.0                 |  |  |  |
|              | 519DS/509AS048W      | 1575                                  | 40,500 | 8.50                | 8.20            | 7.70     | 42,500    | 2.78 | 25,800   | 2.10 | 6.60                     | 8.0                 |  |  |  |
|              | 519DS049             | 1575                                  | 42,000 | 8.70                | 8.50            | 7.95     | 42,500    | 2.80 | 25,600   | 2.10 | 6.70                     | 8.0                 |  |  |  |
|              | 519DS/509AS048C      | 1575                                  | 41,500 | 8.70                | 8.40            | 7.90     | 42,000    | 2.74 | 25,400   | 2.08 | 6.60                     | 8.0                 |  |  |  |
|              | 519E048              | 1575                                  | 40,500 | 8.50                | 8.20            | 7.65     | 42,500    | 2.78 | 25,800   | 2.10 | 6.60                     | 8.0                 |  |  |  |
|              | 508A048              | 1575                                  | 40,500 | 8.40                | 8.10            | 7.60     | 41,500    | 2.72 | 25,600   | 2.08 | 6.50                     | 8.0                 |  |  |  |
|              | 506B049              | 1575                                  | 42,000 | 8.50                | 8.20            | 7.70     | 42,000    | 2.76 | 25,600   | 2.10 | 6.60                     | 8.0                 |  |  |  |
|              | 510B048              | 1575                                  | 41,000 | 8.40                | 8.10            | 7.60     | 42,500    | 2.86 | 26,000   | 2.10 | 6.70                     | 8.0                 |  |  |  |
|              | 517E/GNS042†         | 1575                                  | 40,500 | 8.30                | 8.00            | 7.60     | 43,000    | 2.78 | 26,200   | 2.06 | 6.60                     | 8.0                 |  |  |  |
|              | 517E/GNS043          | 1575                                  | 41,500 | 8.50                | 8.10            | 7.60     | 43,000    | 2.74 | 26,000   | 2.06 | 6.60                     | 8.0                 |  |  |  |
|              | 517E/GNS048          | 1575                                  | 41,000 | 8.50                | 8.10            | 7.60     | 43,000    | 2.84 | 26,200   | 2.10 | 6.70                     | 8.0                 |  |  |  |
|              | 517E/GNS049          | 1575                                  | 42,000 | 8.60                | 8.20            | 7.65     | 43,000    | 2.80 | 26,000   | 2.10 | 6.70                     | 8.0                 |  |  |  |
| 690A042-B    | 519CS042             | 1500                                  | 40,500 | 8.30                | 8.00            | 7.50     | 41,500    | 2.70 | 25,400   | 2.06 | 6.50                     | 8.0                 |  |  |  |
|              | 519DS/509AS042       | 1550                                  | 40,500 | 8.50                | 8.10            | 7.60     | 41,500    | 2.68 | 25,400   | 2.06 | 6.50                     | 8.0                 |  |  |  |
|              | 519DS/509AS042W      | 1550                                  | 40,000 | 8.50                | 8.10            | 7.60     | 41,500    | 2.66 | 25,400   | 2.06 | 6.45                     | 8.0                 |  |  |  |
|              | 519DS/509AS043       | 1575                                  | 42,000 | 8.60                | 8.30            | 7.80     | 42,000    | 2.78 | 25,600   | 2.10 | 6.60                     | 8.0                 |  |  |  |
|              | 519DS/509AS043W      | 1575                                  | 42,000 | 8.60                | 8.30            | 7.75     | 42,000    | 2.76 | 25,600   | 2.10 | 6.60                     | 8.0                 |  |  |  |
|              | 519DS/509AS042C      | 1500                                  | 41,500 | 8.50                | 8.30            | 7.75     | 41,000    | 2.68 | 25,200   | 2.06 | 6.50                     | 8.0                 |  |  |  |
|              | 519E042              | 1550                                  | 40,500 | 8.50                | 8.10            | 7.60     | 41,500    | 2.68 | 25,400   | 2.06 | 6.50                     | 8.0                 |  |  |  |
|              | 506B042              | 1575                                  | 39,500 | 8.30                | 8.00            | 7.55     | 41,000    | 2.56 | 25,200   | 2.00 | 6.20                     | 8.0                 |  |  |  |
|              | 519CS048             | 1500                                  | 40,000 | 8.40                | 8.10            | 7.60     | 42,000    | 2.70 | 25,400   | 2.06 | 6.50                     | 8.0                 |  |  |  |
|              | 519DS048             | 1575                                  | 41,000 | 8.50                | 8.20            | 7.65     | 42,500    | 2.78 | 25,800   | 2.10 | 6.60                     | 8.0                 |  |  |  |
|              | 519DS/509AS048W      | 1575                                  | 41,000 | 8.50                | 8.20            | 7.70     | 42,500    | 2.78 | 25,800   | 2.10 | 6.60                     | 8.0                 |  |  |  |
|              | 519DS049             | 1575                                  | 42,000 | 8.70                | 8.50            | 7.95     | 42,500    | 2.80 | 25,600   | 2.10 | 6.70                     | 8.0                 |  |  |  |
|              | 519DS048             |                                       |        |                     |                 |          |           |      |          |      |                          |                     |  |  |  |

# COMBINATION RATINGS Continued

| OUTDOOR UNIT        | APPROVED INDOOR UNIT | ARI STANDARD RATINGS* (1-Ph and 3-Ph) |         |                     |                 |          |           |        |          |      |                     |                          |
|---------------------|----------------------|---------------------------------------|---------|---------------------|-----------------|----------|-----------|--------|----------|------|---------------------|--------------------------|
|                     |                      | CFM                                   | Cooling |                     |                 |          | Heating   |        |          |      | Sound Rating (Bels) |                          |
|                     |                      |                                       | TC      | Seasonal Efficiency |                 | EER 3-ph | High Temp |        | Low Temp |      |                     | Seasonal Efficiency HSPF |
|                     |                      |                                       |         | With FDR.90‡        | Without FDR.90‡ |          | TC        | COP    | TC       | COP  |                     |                          |
| 690A042-B           | 519E048              | 1575                                  | 41,000  | 8.50                | 8.20            | 7.65     | 42,500    | 2.78   | 25,800   | 2.10 | 6.60                | 8.0                      |
|                     | 508A048              | 1575                                  | 41,000  | 8.40                | 8.10            | 7.60     | 41,500    | 2.72   | 25,600   | 2.08 | 6.50                | 8.0                      |
|                     | 506B049              | 1575                                  | 42,000  | 8.50                | 8.20            | 7.70     | 42,000    | 2.76   | 25,600   | 2.10 | 6.60                | 8.0                      |
|                     | 510B048              | 1575                                  | 41,500  | 8.40                | 8.10            | 7.60     | 42,500    | 2.86   | 26,000   | 2.10 | 6.70                | 8.0                      |
|                     | 517E/GNS042†         | 1575                                  | 41,000  | 8.30                | 8.00            | 7.60     | 43,000    | 2.78   | 26,200   | 2.06 | 6.60                | 8.0                      |
|                     | 517E/GNS043          | 1575                                  | 42,000  | 8.50                | 8.10            | 7.60     | 43,000    | 2.74   | 26,000   | 2.06 | 6.60                | 8.0                      |
|                     | 517E/GNS048          | 1575                                  | 41,500  | 8.50                | 8.10            | 7.60     | 43,000    | 2.84   | 26,200   | 2.10 | 6.70                | 8.0                      |
|                     | 517E/GNS049          | 1575                                  | 42,000  | 8.60                | 8.20            | 7.65     | 43,000    | 2.80   | 26,000   | 2.10 | 6.70                | 8.0                      |
|                     | 617ANA/ANU/ANM042    | 1575                                  | 42,000  | 8.90                | 8.20            | 7.60     | 43,000    | 2.72   | 26,200   | 2.18 | 6.80                | 8.0                      |
|                     | 617ANA/ANU/ANM048    | 1575                                  | 42,500  | 9.00                | 8.70            | 8.05     | 44,000    | 2.86   | 26,600   | 2.26 | 7.00                | 8.0                      |
| 617ANA/ANU036**     | 1300                 | 40,000                                | —       | 8.00                | 7.60            | 42,000   | 2.70      | 26,400 | 2.16     | 6.60 | 8.0                 |                          |
| 690A048-B           | 519CS048             | 1500                                  | 45,000  | 8.50                | 8.20            | 6.90     | 49,000    | 2.70   | 29,800   | 2.16 | 6.70                | 8.2                      |
|                     | 519DS048             | 1800                                  | 46,500  | 8.70                | 8.40            | 7.10     | 50,500    | 2.80   | 30,800   | 2.20 | 6.85                | 8.2                      |
|                     | 519DS/509AS048W      | 1800                                  | 46,500  | 8.70                | 8.40            | 7.10     | 50,500    | 2.80   | 30,800   | 2.20 | 6.85                | 8.2                      |
|                     | 519DS049             | 1800                                  | 47,500  | 8.80                | 8.50            | 7.15     | 50,500    | 2.84   | 30,600   | 2.24 | 6.90                | 8.2                      |
|                     | 519DS/509AS048C      | 1600                                  | 47,000  | 8.80                | 8.50            | 7.15     | 49,000    | 2.74   | 29,800   | 2.18 | 6.70                | 8.2                      |
|                     | 519E048              | 1800                                  | 46,500  | 8.70                | 8.40            | 7.10     | 50,500    | 2.80   | 30,800   | 2.20 | 7.00                | 8.2                      |
|                     | 508A048              | 1600                                  | 46,000  | 8.70                | 8.40            | 7.05     | 49,000    | 2.70   | 30,000   | 2.16 | 6.85                | 8.2                      |
|                     | 506B049              | 1800                                  | 47,000  | 8.80                | 8.50            | 7.15     | 49,000    | 2.80   | 30,600   | 2.20 | 6.85                | 8.2                      |
|                     | 510B048              | 1800                                  | 47,000  | 8.60                | 8.30            | 7.00     | 51,000    | 2.90   | 31,000   | 2.24 | 6.90                | 8.2                      |
|                     | 519CS060             | 1600                                  | 45,000  | 8.60                | 8.30            | 7.00     | 49,000    | 2.70   | 29,800   | 2.14 | 6.70                | 8.2                      |
|                     | 519DS/509AS057C      | 1800                                  | 47,500  | 8.80                | 8.50            | 7.15     | 50,500    | 2.84   | 30,600   | 2.24 | 6.90                | 8.2                      |
|                     | 519DS/509AS060       | 1800                                  | 48,000  | 8.80                | 8.50            | 7.10     | 51,000    | 2.90   | 31,200   | 2.26 | 6.90                | 8.2                      |
|                     | 519DS/509AS061       | 1800                                  | 48,500  | 8.90                | 8.60            | 7.20     | 50,000    | 2.90   | 30,800   | 2.24 | 6.90                | 8.2                      |
|                     | 519E060              | 1800                                  | 47,500  | 8.80                | 8.50            | 7.15     | 50,500    | 2.84   | 30,600   | 2.24 | 6.90                | 8.2                      |
|                     | 506B061              | 1800                                  | 48,000  | 8.80                | 8.50            | 7.15     | 50,500    | 2.90   | 31,200   | 2.26 | 6.90                | 8.2                      |
|                     | 510B060              | 1800                                  | 47,500  | 8.80                | 8.50            | 7.10     | 51,500    | 2.90   | 31,400   | 3.26 | 7.00                | 8.2                      |
|                     | 517E/GNS048†         | 1800                                  | 47,000  | 8.50                | 8.20            | 7.30     | 51,000    | 2.84   | 31,400   | 2.16 | 6.85                | 8.2                      |
|                     | 517E/GNS049          | 1800                                  | 47,500  | 8.70                | 8.40            | 7.05     | 51,500    | 2.80   | 31,400   | 2.20 | 6.85                | 8.2                      |
|                     | 517E/GNS060          | 1800                                  | 47,000  | 8.50                | 8.10            | 6.80     | 51,500    | 2.84   | 32,400   | 2.16 | 6.85                | 8.2                      |
|                     | 517E/GNS062          | 1800                                  | 47,500  | 8.60                | 8.30            | 6.95     | 52,000    | 2.90   | 32,300   | 2.20 | 6.90                | 8.2                      |
| 517E/GNS063         | 1800                 | 48,000                                | 8.70    | 8.40                | 7.05            | 52,000   | 2.88      | 32,000 | 2.20     | 6.90 | 8.2                 |                          |
| 617ANA/ANU/ANM048   | 1800                 | 47,000                                | 9.45    | 9.00                | 7.80            | 49,000   | 2.86      | 31,600 | 2.26     | 7.15 | 8.2                 |                          |
| 617ANA/ANU/ANM060   | 1800                 | 47,500                                | 9.30    | 9.00                | 7.60            | 51,000   | 2.88      | 32,400 | 2.26     | 7.20 | 8.2                 |                          |
| 690A048-D           | 519CS048             | 1500                                  | 44,500  | 9.20                | 8.90            | 8.40     | 49,000    | 2.96   | 30,400   | 2.26 | 6.85                | 7.8                      |
|                     | 519DS048             | 1700                                  | 45,500  | 9.20                | 8.90            | 8.40     | 50,500    | 3.08   | 31,200   | 2.30 | 6.90                | 7.8                      |
|                     | 519DS/509AS048W      | 1700                                  | 45,500  | 9.20                | 8.90            | 8.40     | 50,500    | 3.06   | 31,200   | 2.30 | 6.90                | 7.8                      |
|                     | 519DS049             | 1700                                  | 47,500  | 9.50                | 9.20            | 8.70     | 50,500    | 3.10   | 31,200   | 2.32 | 7.00                | 7.8                      |
|                     | 519DS048C            | 1600                                  | 46,500  | 9.50                | 9.10            | 8.55     | 49,000    | 3.00   | 30,600   | 2.28 | 6.85                | 7.8                      |
|                     | 519E048              | 1700                                  | 45,500  | 9.20                | 8.90            | 8.40     | 50,500    | 3.08   | 31,200   | 2.30 | 6.90                | 7.8                      |
|                     | 508A048              | 1600                                  | 45,500  | 9.30                | 9.00            | 8.45     | 49,500    | 2.96   | 30,800   | 2.28 | 6.75                | 7.8                      |
|                     | 506B049              | 1700                                  | 47,000  | 9.40                | 9.10            | 8.55     | 50,500    | 3.04   | 31,000   | 2.30 | 6.85                | 7.8                      |
|                     | 510B048              | 1700                                  | 46,500  | 9.40                | 9.10            | 8.55     | 51,500    | 3.18   | 31,400   | 2.32 | 7.10                | 7.8                      |
|                     | 519CS060             | 1600                                  | 47,000  | 9.50                | 9.10            | 8.55     | 51,000    | 3.14   | 31,200   | 2.34 | 7.00                | 7.8                      |
|                     | 519DS/509AS057C      | 1700                                  | 47,000  | 9.50                | 9.10            | 8.60     | 50,500    | 3.10   | 31,200   | 2.32 | 7.00                | 7.8                      |
|                     | 519DS/509AS060       | 1700                                  | 47,500  | 9.50                | 9.20            | 8.65     | 51,500    | 3.20   | 31,600   | 2.36 | 7.10                | 7.8                      |
|                     | 519DS/509AS061       | 1700                                  | 48,000  | 9.60                | 9.30            | 8.75     | 52,000    | 3.18   | 31,400   | 2.36 | 7.20                | 7.8                      |
|                     | 519E060              | 1700                                  | 47,000  | 9.50                | 9.10            | 8.60     | 50,500    | 3.10   | 31,200   | 2.32 | 7.00                | 7.8                      |
|                     | 506B061              | 1700                                  | 48,000  | 9.60                | 9.30            | 8.80     | 51,000    | 3.18   | 31,400   | 2.36 | 7.10                | 7.8                      |
|                     | 510B060              | 1700                                  | 47,500  | 9.50                | 9.20            | 8.70     | 52,500    | 3.30   | 31,800   | 2.38 | 7.20                | 7.8                      |
|                     | 517E/GNS048          | 1700                                  | 46,000  | 9.10                | 8.80            | 8.30     | 51,000    | 3.18   | 31,600   | 2.32 | 6.85                | 7.8                      |
|                     | 517E/GNS049†         | 1700                                  | 47,500  | 9.40                | 9.00            | 8.55     | 51,000    | 3.12   | 31,600   | 2.30 | 7.00                | 7.8                      |
|                     | 517E/GNS060          | 1700                                  | 47,000  | 8.80                | 8.50            | 8.05     | 52,000    | 3.14   | 32,800   | 2.26 | 6.90                | 7.8                      |
|                     | 517E/GNS062          | 1700                                  | 47,500  | 9.00                | 8.60            | 8.15     | 52,500    | 3.18   | 32,600   | 2.30 | 7.00                | 7.8                      |
| 517E/GNS063         | 1700                 | 48,000                                | 9.30    | 9.00                | 8.50            | 52,500   | 3.14      | 32,400 | 2.30     | 7.10 | 7.8                 |                          |
| 617ANA/ANU/ANM042** | 1530                 | 45,500                                | —       | 8.50                | 8.05            | 48,500   | 2.92      | 29,000 | 2.24     | 6.80 | 7.8                 |                          |
| 617ANA/ANU/ANM048   | 1700                 | 47,000                                | 9.50    | 9.00                | 8.25            | 50,500   | 3.08      | 29,600 | 2.30     | 7.20 | 7.8                 |                          |
| 617ANA/ANU/ANM060   | 1700                 | 47,500                                | 9.30    | 8.90                | 8.15            | 51,000   | 3.08      | 30,400 | 2.28     | 7.30 | 7.8                 |                          |
| 690A060-A           | 519CS060             | 1600                                  | 54,500  | 8.50                | 8.10            | 7.85     | 58,000    | 2.78   | 36,000   | 2.30 | 6.60                | 8.2                      |
|                     | 519DS/509AS057C      | 2000                                  | 55,500  | 8.50                | 8.20            | 7.95     | 58,000    | 2.80   | 36,800   | 2.30 | 6.60                | 8.2                      |
|                     | 519DS/509AS060       | 2050                                  | 57,500  | 8.60                | 8.30            | 8.00     | 59,000    | 2.90   | 37,600   | 2.36 | 6.70                | 8.2                      |
|                     | 519DS/509AS061       | 2050                                  | 57,500  | 8.70                | 8.40            | 8.15     | 59,000    | 2.88   | 37,200   | 2.36 | 6.70                | 8.2                      |
|                     | 519E060              | 2000                                  | 55,500  | 8.50                | 8.20            | 7.95     | 58,000    | 2.80   | 36,800   | 2.30 | 6.60                | 8.2                      |
|                     | 506B061              | 2000                                  | 58,000  | 8.70                | 8.40            | 8.15     | 59,000    | 2.88   | 37,200   | 2.36 | 6.70                | 8.2                      |
|                     | 510B060              | 2050                                  | 57,500  | 8.40                | 8.10            | 7.80     | 59,000    | 2.88   | 37,200   | 2.36 | 6.70                | 8.2                      |
|                     | 517E/GNS060          | 2050                                  | 56,000  | 8.00                | 7.80            | 7.55     | 60,500    | 2.88   | 39,000   | 2.26 | 6.60                | 8.2                      |
|                     | 517E/GNS062          | 2050                                  | 57,000  | 8.30                | 8.00            | 7.80     | 60,000    | 2.90   | 38,500   | 2.30 | 6.70                | 8.2                      |
|                     | 517E/GNS063          | 2050                                  | 58,000  | 8.40                | 8.10            | 7.85     | 61,000    | 2.88   | 38,500   | 2.30 | 6.70                | 8.2                      |
|                     | 517E005 & 315016-401 | 2100                                  | 58,500  | 8.50                | 8.20            | 7.90     | 61,500    | 2.98   | 38,500   | 2.36 | 6.70                | 8.2                      |
|                     | 617ANA/ANU/ANM048**  | 1750                                  | 53,500  | —                   | 8.20            | 8.00     | 60,000    | 3.02   | 38,500   | 2.36 | 7.00                | 8.2                      |
|                     | 617ANA/ANU/ANM060†   | 2100                                  | 55,500  | 9.00                | 8.50            | 7.85     | 62,000    | 3.04   | 39,500   | 2.40 | 7.50                | 8.2                      |

COP — Coefficient of Performance

EER — Energy Efficiency Ratio

HSPF — Heating Seasonal Performance Factor

TC — Total Capacity (Btu/h)

FDR — Fan-Delay Relay

\*Ratings are net values reflecting the effects of circulating fan heat. Supplemental electric heat is not included. Ratings are based on:

Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor entering air temperature and 95°F (35°C) db air entering outdoor unit.

High-Temperature Heating Standard: 70°F (21°C) db indoor entering air temperature and 47°F (8°C) db 43°F (6°C) wb air entering outdoor unit.

Low-Temperature Heating Standard: 70°F (21°C) db indoor entering air temperature and 17°F (–9°C) db, 15°F (–10°C) wb air entering outdoor unit.

†Outdoor section/indoor section combination tested in accordance with DOE test procedures for heat pumps. Ratings for other combinations are determined under DOE computer simulation procedures.

‡See FDR Table.

\*\*See page 20 for fan coil downsizing requirements.



## FDR.90 TABLE

| METHOD      | PART/MODEL NUMBER            |
|-------------|------------------------------|
| Indoor Fan  | 313902-751                   |
| Time Delay  | 309919-701                   |
| Relay       | 309471-701                   |
| Furnaces    | 395C, 376C, 398A, 398B, 399A |
| Electric    | 314301-468 5 KW              |
| Heater      | 314301-469 7.5 KW            |
| Packages    | 314301-470 10 KW             |
|             | 314301-471 15 KW             |
|             | 302593-433 Cooling Control   |
| Thermostats | Not Available At This Time   |

**NOTE:** In most cases, only one of the above should be used to achieve FDR function. More than one of the methods listed above in a system may cause degradation in performance.

### DETAILED COOLING CAPACITIES\*

| EVAPORATOR AIR   |             | CONDENSER ENTERING AIR TEMPERATURES °F |       |                   |                  |          |                   |                  |       |                   |                  |       |                   |
|--|-------------|--|-------|-------------------|------------------|----------|-------------------|------------------|-------|-------------------|------------------|-------|-------------------|
| AIR  |             | 85                                     |       |                   | 95               |          |                   | 105              |       |                   | 115              |       |                   |
| CFM  | E<br>W<br>B | Capacity MBtu/h†                       |       | Total System Kw** | Capacity MBtu/h† |          | Total System Kw** | Capacity MBtu/h† |       | Total System Kw** | Capacity MBtu/h† |       | Total System Kw** |
|  |             | Total                                  | Sens‡ |                   | Total            | Sens‡    |                   | Total            | Sens‡ |                   | Total            | Sens‡ |                   |
| 690A018-A Outdoor Section With 517EN024 Indoor Section                 |             |  |       |                   |                  |          |                   |                  |       |                   |                  |       |                   |
| 600  | 72          | 19.8                                   | 9.92  | 2.13              | 18.7             | 9.54     | 2.23              | 17.6             | 9.15  | 2.34              | 16.5             | 8.77  | 2.46              |
|  | 67          | 18.0                                   | 12.7  | 2.05              | 17.0             | 12.3     | 2.15              | 15.9             | 11.8  | 2.25              | 14.9             | 11.4  | 2.36              |
|  | 63††        | 16.6                                   | 12.2  | 1.99              | 15.6             | 11.8     | 2.08              | 14.6             | 11.4  | 2.18              | 13.6             | 11.0  | 2.28              |
|  | 62          | 16.3                                   | 15.2  | 1.98              | 15.4             | 14.7     | 2.07              | 14.5             | 14.2  | 2.17              | 13.6             | 13.6  | 2.28              |
|  | 57          | 15.9                                   | 15.9  | 1.96              | 15.1             | 15.1     | 2.06              | 14.4             | 14.4  | 2.16              | 13.6             | 13.6  | 2.28              |
| 675  | 72          | 20.0                                   | 10.3  | 2.17              | 19.0             | 9.92     | 2.28              | 17.8             | 9.53  | 2.39              | 16.7             | 9.15  | 2.50              |
|  | 67          | 18.2                                   | 13.3  | 2.09              | 17.2             | 12.9     | 2.19              | 16.1             | 12.5  | 2.29              | 15.1             | 12.1  | 2.40              |
|  | 63††        | 16.8                                   | 12.9  | 2.03              | 15.8             | 12.4     | 2.12              | 14.8             | 12.0  | 2.22              | 13.8             | 11.6  | 2.33              |
|  | 62          | 16.7                                   | 16.1  | 2.02              | 15.7             | 15.5     | 2.12              | 14.8             | 14.8  | 2.22              | 14.1             | 14.1  | 2.34              |
|  | 57          | 16.4                                   | 16.4  | 2.01              | 15.6             | 15.6     | 2.12              | 14.9             | 14.9  | 2.23              | 14.1             | 14.1  | 2.34              |
| 750  | 72          | 20.3                                   | 10.7  | 2.22              | 19.1             | 10.3     | 2.32              | 18.0             | 9.89  | 2.43              | 16.9             | 9.52  | 2.55              |
|  | 67          | 18.5                                   | 14.0  | 2.14              | 17.4             | 13.6     | 2.23              | 16.3             | 13.2  | 2.34              | 15.2             | 12.7  | 2.45              |
|  | 63††        | 17.0                                   | 13.5  | 2.07              | 16.0             | 13.0     | 2.17              | 15.0             | 12.6  | 2.26              | 13.9             | 12.2  | 2.37              |
|  | 62          | 17.0                                   | 16.8  | 2.07              | 16.1             | 16.1     | 2.17              | 15.3             | 15.3  | 2.28              | 14.4             | 14.4  | 2.40              |
|  | 57          | 16.9                                   | 16.9  | 2.07              | 16.1             | 16.1     | 2.17              | 15.3             | 15.3  | 2.28              | 14.4             | 14.4  | 2.40              |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |       |                   |                  |          |                   |                  |       |                   |                  |       |                   |
| Indoor Section   | Size        | Cooling                                |       | Indoor Section    | Size             | Cooling  |                   |                  |       |                   |                  |       |                   |
|  |             | Capacity                               | Power |                   |                  | Capacity | Power             |                  |       |                   |                  |       |                   |
| 519DS/509AS  | 018         | 0.99                                   | 0.98  | 517EN             | 018              | 0.97     | 0.99              |                  |       |                   |                  |       |                   |
|  | 019         | 1.03                                   | 1.00  |                   | 024              | 1.00     | 1.00              |                  |       |                   |                  |       |                   |
|  | 024         | 1.03                                   | 1.00  |                   | 025              | 1.04     | 1.02              |                  |       |                   |                  |       |                   |
| 519E   | 018         | 0.99                                   | 0.98  | 513C              | 018              | 0.98     | 1.01              |                  |       |                   |                  |       |                   |
|  | 024         | 1.03                                   | 1.00  |                   | 024              | 1.00     | 1.00              |                  |       |                   |                  |       |                   |
| 508A   | 024         | 1.02                                   | 1.00  | 516A              | 018              | 1.00     | 0.98              |                  |       |                   |                  |       |                   |
| 510B   | 024         | 1.01                                   | 0.99  |                   | 024              | 1.01     | 1.01              |                  |       |                   |                  |       |                   |
|  | —           | —                                      | —     | 617ANA/ANU        | 018              | 1.02     | 0.99              |                  |       |                   |                  |       |                   |
|  |             |  |       |                   | 024              | 1.05     | 0.99              |                  |       |                   |                  |       |                   |
| 690A018-B Outdoor Section With 617A018 Indoor Section                  |             |  |       |                   |                  |          |                   |                  |       |                   |                  |       |                   |
| 600  | 72          | 20.4                                   | 10.2  | 2.12              | 19.3             | 9.81     | 2.24              | 18.1             | 9.40  | 2.35              | 17.0             | 8.99  | 2.47              |
|  | 67          | 18.6                                   | 13.0  | 2.04              | 17.6             | 12.6     | 2.15              | 16.5             | 12.2  | 2.26              | 15.4             | 11.8  | 2.37              |
|  | 63††        | 17.2                                   | 12.6  | 1.98              | 16.2             | 12.2     | 2.09              | 15.1             | 11.7  | 2.19              | 14.1             | 11.3  | 2.29              |
|  | 62          | 16.9                                   | 15.7  | 1.97              | 15.9             | 15.1     | 2.07              | 14.9             | 14.6  | 2.18              | 14.0             | 13.9  | 2.28              |
|  | 57          | 16.3                                   | 16.3  | 1.94              | 15.5             | 15.5     | 2.05              | 14.7             | 14.7  | 2.17              | 13.9             | 13.9  | 2.28              |
| 675  | 72          | 20.7                                   | 10.6  | 2.17              | 19.5             | 10.2     | 2.28              | 18.3             | 9.75  | 2.39              | 17.1             | 9.35  | 2.51              |
|  | 67          | 18.9                                   | 13.7  | 2.09              | 17.8             | 13.2     | 2.19              | 16.7             | 12.8  | 2.31              | 15.5             | 12.4  | 2.41              |
|  | 63††        | 17.5                                   | 13.2  | 2.03              | 16.4             | 12.8     | 2.13              | 15.3             | 12.3  | 2.23              | 14.3             | 11.9  | 2.34              |
|  | 62          | 17.2                                   | 16.5  | 2.01              | 16.2             | 15.9     | 2.12              | 15.2             | 15.2  | 2.23              | 14.3             | 14.3  | 2.34              |
|  | 57          | 16.8                                   | 16.8  | 2.00              | 16.0             | 16.0     | 2.11              | 15.2             | 15.2  | 2.22              | 14.3             | 14.3  | 2.34              |
| 750  | 72          | 20.9                                   | 10.9  | 2.20              | 19.7             | 10.5     | 2.32              | 18.5             | 10.1  | 2.44              | 17.3             | 9.67  | 2.55              |
|  | 67          | 19.1                                   | 14.3  | 2.13              | 18.0             | 13.9     | 2.24              | 16.8             | 13.4  | 2.34              | 15.7             | 13.0  | 2.45              |
|  | 63††        | 17.6                                   | 13.8  | 2.06              | 16.6             | 13.3     | 2.17              | 15.5             | 12.9  | 2.27              | 14.4             | 12.4  | 2.38              |
|  | 62          | 17.5                                   | 17.2  | 2.06              | 16.5             | 16.4     | 2.16              | 15.6             | 15.6  | 2.28              | 14.7             | 14.7  | 2.39              |
|  | 57          | 17.3                                   | 17.3  | 2.05              | 16.4             | 16.4     | 2.16              | 15.6             | 15.6  | 2.28              | 14.7             | 14.7  | 2.39              |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |       |                   |                  |          |                   |                  |       |                   |                  |       |                   |
| Indoor Section   | Size        | Cooling                                |       | Indoor Section    | Size             | Cooling  |                   |                  |       |                   |                  |       |                   |
|  |             | Capacity                               | Power |                   |                  | Capacity | Power             |                  |       |                   |                  |       |                   |
| 519DS/509AS  | 018         | 0.98                                   | 1.00  | 517EN             | 018              | 0.96     | 1.01              |                  |       |                   |                  |       |                   |
|  | 019         | 1.02                                   | 1.02  |                   | 024              | 0.98     | 1.01              |                  |       |                   |                  |       |                   |
|  | 024         | 1.02                                   | 1.02  |                   | 025              | 1.01     | 1.06              |                  |       |                   |                  |       |                   |
| 519E   | 018         | 0.98                                   | 1.00  | 513C              | 018              | 0.96     | 1.03              |                  |       |                   |                  |       |                   |
|  | 024         | 1.02                                   | 1.02  |                   | 024              | 1.00     | 1.02              |                  |       |                   |                  |       |                   |
| 508A   | 024         | 1.01                                   | 1.02  | 516A              | 018              | 1.02     | 0.99              |                  |       |                   |                  |       |                   |
|  | —           | —                                      | —     |                   | 024              | 1.02     | 1.02              |                  |       |                   |                  |       |                   |
|  |             |  |       | 617ANA/ANU        | 018              | 1.00     | 1.00              |                  |       |                   |                  |       |                   |
|  |             |  |       |                   | 024              | 1.02     | 1.02              |                  |       |                   |                  |       |                   |

See notes on page 15.

# **DETAILED COOLING CAPACITIES\* Continued**

| EVAPORATOR AIR   |             | CONDENSER ENTERING AIR TEMPERATURES °F |          |                         |                     |       |                         |                     |       |                         |                     |       |                         |
|--|-------------|--|----------|-------------------------|---------------------|-------|-------------------------|---------------------|-------|-------------------------|---------------------|-------|-------------------------|
| AIR  |             | 85                                     |          |                         | 95                  |       |                         | 105                 |       |                         | 115                 |       |                         |
| CFM  | E<br>W<br>B | Capacity<br>MBtu/h†                    |          | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** |
|  |             | Total                                  | Sens†    |                         | Total               | Sens† |                         | Total               | Sens† |                         | Total               | Sens† |                         |
| 690A024-A Outdoor Section With 517EN030 Indoor Section                 |             |  |          |                         |                     |       |                         |                     |       |                         |                     |       |                         |
| 800  | 72          | 26.7                                   | 13.2     | 3.04                    | 25.2                | 12.7  | 3.21                    | 23.6                | 12.1  | 3.37                    | 22.0                | 11.5  | 3.54                    |
|  | 67          | 24.3                                   | 16.8     | 2.91                    | 22.9                | 16.2  | 3.07                    | 21.4                | 15.6  | 3.23                    | 19.9                | 15.0  | 3.38                    |
|  | 63††        | 22.5                                   | 16.3     | 2.82                    | 21.1                | 15.7  | 2.97                    | 19.7                | 15.1  | 3.12                    | 18.3                | 14.5  | 3.26                    |
|  | 62          | 22.1                                   | 20.2     | 2.80                    | 20.8                | 19.5  | 2.95                    | 19.5                | 18.8  | 3.10                    | 18.3                | 18.0  | 3.25                    |
|  | 57          | 21.4                                   | 21.4     | 2.76                    | 20.3                | 20.3  | 2.92                    | 19.3                | 19.3  | 3.08                    | 18.2                | 18.2  | 3.25                    |
| 900  | 72          | 27.1                                   | 13.7     | 3.11                    | 25.5                | 13.2  | 3.27                    | 23.9                | 12.6  | 3.44                    | 22.2                | 12.0  | 3.60                    |
|  | 67          | 24.7                                   | 17.6     | 2.98                    | 23.2                | 17.1  | 3.14                    | 21.7                | 16.5  | 3.29                    | 20.1                | 15.9  | 3.45                    |
|  | 63††        | 22.9                                   | 17.1     | 2.88                    | 21.4                | 16.5  | 3.03                    | 20.0                | 15.9  | 3.18                    | 18.6                | 15.2  | 3.33                    |
|  | 62          | 22.6                                   | 21.3     | 2.87                    | 21.3                | 20.6  | 3.02                    | 20.0                | 19.8  | 3.17                    | 18.7                | 18.7  | 3.34                    |
|  | 57          | 22.1                                   | 22.1     | 2.84                    | 21.0                | 21.0  | 3.01                    | 19.9                | 19.9  | 3.17                    | 18.7                | 18.7  | 3.34                    |
| 1000   | 72          | 27.4                                   | 14.2     | 3.17                    | 25.8                | 13.6  | 3.33                    | 24.1                | 13.0  | 3.50                    | 22.4                | 12.5  | 3.66                    |
|  | 67          | 25.0                                   | 18.5     | 3.04                    | 23.5                | 17.9  | 3.20                    | 21.9                | 17.3  | 3.35                    | 20.3                | 16.7  | 3.51                    |
|  | 63††        | 23.1                                   | 17.8     | 2.94                    | 21.7                | 17.2  | 3.09                    | 20.2                | 16.6  | 3.24                    | 18.7                | 16.0  | 3.39                    |
|  | 62          | 23.0                                   | 22.3     | 2.93                    | 21.7                | 21.5  | 3.09                    | 20.4                | 20.4  | 3.25                    | 19.2                | 19.2  | 3.42                    |
|  | 57          | 22.8                                   | 22.8     | 2.92                    | 21.6                | 21.6  | 3.09                    | 20.4                | 20.4  | 3.25                    | 19.2                | 19.2  | 3.42                    |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |          |                         |                     |       |                         |                     |       |                         |                     |       |                         |
| Indoor Section   |             | Size                                   | Cooling  |                         | Indoor Section      |       | Size                    | Cooling             |       |                         |                     |       |                         |
|  |             |  | Capacity | Power                   |                     |       |                         | Capacity            | Power |                         |                     |       |                         |
| 519DS/509AS  |             | 024                                    | 0.98     | 0.99                    | 517EN               |       | 024                     | 0.92                | 0.97  |                         |                     |       |                         |
|  |             | 025                                    | 1.00     | 1.00                    |                     |       | 025                     | 0.95                | 0.98  |                         |                     |       |                         |
|  |             | 030B                                   | 1.03     | 1.01                    |                     |       | 030                     | 1.00                | 1.00  |                         |                     |       |                         |
|  |             | 030WB                                  | 1.03     | 1.01                    |                     |       | 031                     | 1.03                | 1.03  |                         |                     |       |                         |
| 519E   |             | 024                                    | 0.98     | 0.99                    | 513C                |       | 024                     | 0.95                | 0.98  |                         |                     |       |                         |
|  |             | 030                                    | 1.03     | 1.01                    |                     |       | 030                     | 0.99                | 1.03  |                         |                     |       |                         |
| 508A   |             | 024                                    | 0.97     | 0.99                    | 516A                |       | 024                     | 0.99                | 0.99  |                         |                     |       |                         |
| 506B   |             | 030                                    | 1.00     | 1.00                    |                     |       | 030                     | 1.01                | 1.03  |                         |                     |       |                         |
| 510B   |             | 036                                    | 0.92     | 0.97                    | 617ANA/ANU          |       | 018††                   | 0.95                | 1.01  |                         |                     |       |                         |
|  |             | —                                      | —        | —                       |                     |       | 024                     | 1.01                | 0.99  |                         |                     |       |                         |
|  |             | —                                      | —        | —                       |                     |       | 030                     | 1.03                | 1.01  |                         |                     |       |                         |
| 690A030-A Outdoor Section With 517EN036 Indoor Section                 |             |  |          |                         |                     |       |                         |                     |       |                         |                     |       |                         |
| 1000   | 72          | 32.9                                   | 16.5     | 3.70                    | 30.9                | 15.8  | 3.95                    | 29.0                | 15.1  | 4.18                    | 27.0                | 14.4  | 4.42                    |
|  | 67          | 30.1                                   | 21.2     | 3.57                    | 28.3                | 20.5  | 3.80                    | 26.4                | 19.8  | 4.02                    | 24.6                | 19.1  | 4.24                    |
|  | 63††        | 27.9                                   | 20.6     | 3.46                    | 26.2                | 19.8  | 3.68                    | 24.5                | 19.1  | 3.89                    | 22.7                | 18.4  | 4.10                    |
|  | 62          | 27.6                                   | 25.7     | 3.44                    | 25.9                | 24.9  | 3.66                    | 24.3                | 23.9  | 3.89                    | 22.8                | 22.8  | 4.11                    |
|  | 57          | 26.9                                   | 26.9     | 3.41                    | 25.6                | 25.6  | 3.64                    | 24.2                | 24.2  | 3.88                    | 22.8                | 22.8  | 4.11                    |
| 1125   | 72          | 33.3                                   | 17.1     | 3.78                    | 31.3                | 16.4  | 4.03                    | 29.3                | 15.7  | 4.27                    | 27.2                | 15.0  | 4.50                    |
|  | 67          | 30.5                                   | 22.3     | 3.64                    | 28.6                | 21.6  | 3.87                    | 26.7                | 20.9  | 4.10                    | 24.8                | 20.1  | 4.32                    |
|  | 63††        | 28.3                                   | 21.6     | 3.54                    | 26.5                | 20.9  | 3.76                    | 24.7                | 20.1  | 3.98                    | 22.9                | 19.4  | 4.19                    |
|  | 62          | 28.1                                   | 27.1     | 3.53                    | 26.4                | 26.1  | 3.75                    | 24.9                | 24.9  | 3.98                    | 23.4                | 23.4  | 4.22                    |
|  | 57          | 27.7                                   | 27.7     | 3.51                    | 26.3                | 26.3  | 3.75                    | 24.9                | 24.9  | 3.98                    | 23.4                | 23.4  | 4.22                    |
| 1250   | 72          | 33.6                                   | 17.7     | 3.86                    | 31.5                | 17.0  | 4.10                    | 29.5                | 16.3  | 4.34                    | 27.4                | 15.6  | 4.57                    |
|  | 67          | 30.8                                   | 23.4     | 3.72                    | 28.8                | 22.7  | 3.95                    | 26.9                | 21.9  | 4.18                    | 25.0                | 21.1  | 4.40                    |
|  | 63††        | 28.5                                   | 22.6     | 3.61                    | 26.7                | 21.8  | 3.83                    | 24.9                | 21.1  | 4.05                    | 23.1                | 20.3  | 4.26                    |
|  | 62          | 28.5                                   | 28.2     | 3.61                    | 27.0                | 27.0  | 3.84                    | 25.4                | 25.4  | 4.08                    | 23.9                | 23.9  | 4.32                    |
|  | 57          | 28.4                                   | 28.4     | 3.60                    | 27.0                | 27.0  | 3.84                    | 25.4                | 25.4  | 4.08                    | 23.9                | 23.9  | 4.32                    |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |          |                         |                     |       |                         |                     |       |                         |                     |       |                         |
| Indoor Section   |             | Size                                   | Cooling  |                         | Indoor Section      |       | Size                    | Cooling             |       |                         |                     |       |                         |
|  |             |  | Capacity | Power                   |                     |       |                         | Capacity            | Power |                         |                     |       |                         |
| 519CS  |             | 036                                    | 1.01     | 0.99                    | 506B                |       | 030                     | 0.98                | 0.98  |                         |                     |       |                         |
| 519DS  |             | 036WB                                  | 1.02     | 1.00                    | 510B                |       | 036                     | 1.00                | 0.99  |                         |                     |       |                         |
| 519DS/509AS  |             | 030WB                                  | 1.00     | 0.97                    | 517EN               |       | 030                     | 0.97                | 0.98  |                         |                     |       |                         |
|  |             | 030B                                   | 1.00     | 0.97                    |                     |       | 036                     | 1.01                | 0.99  |                         |                     |       |                         |
|  |             | 036B                                   | 1.02     | 1.00                    |                     |       | 031                     | 1.01                | 1.00  |                         |                     |       |                         |
| 519E   |             | 030                                    | 1.00     | 0.97                    | 513C                |       | 036                     | 1.00                | 1.00  |                         |                     |       |                         |
|  |             | 036                                    | 1.02     | 1.00                    |                     |       | 030                     | 0.98                | 0.99  |                         |                     |       |                         |
| 508A   |             | 036                                    | 0.99     | 0.98                    | 516A                |       | 030                     | 0.99                | 1.00  |                         |                     |       |                         |
|  |             | —                                      | —        | —                       |                     |       | 030                     | 1.01                | 0.99  |                         |                     |       |                         |
|  |             |  |          |                         |                     |       | 617ANA/ANU              | 036                 | 1.01  | 1.00                    |                     |       |                         |

See notes on page 15.

# **DETAILED COOLING CAPACITIES\* Continued**

| EVAPORATOR AIR   |             | CONDENSER ENTERING AIR TEMPERATURES °F |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
|--|-------------|--|-------|-------------------------|---------------------|----------|-------------------------|---------------------|-------|-------------------------|---------------------|-------|-------------------------|
| AIR  |             | 85                                     |       |                         | 95                  |          |                         | 105                 |       |                         | 115                 |       |                         |
| CFM  | E<br>W<br>B | Capacity<br>MBtu/h†                    |       | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |          | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** |
|  |             | Total                                  | Sens‡ |                         | Total               | Sens‡    |                         | Total               | Sens‡ |                         | Total               | Sens‡ |                         |
| 690A030-B Outdoor Section With 617A030 Indoor Section                  |             |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| 875  | 72          | 33.3                                   | 16.5  | 3.61                    | 31.2                | 15.7     | 3.81                    | 29.0                | 14.9  | 4.01                    | 26.7                | 14.1  | 4.20                    |
|  | 67          | 30.4                                   | 20.9  | 3.46                    | 28.4                | 20.1     | 3.64                    | 26.3                | 19.3  | 3.83                    | 24.2                | 18.5  | 4.00                    |
|  | 63††        | 28.1                                   | 20.3  | 3.34                    | 26.2                | 19.4     | 3.52                    | 24.2                | 18.6  | 3.69                    | 22.3                | 17.7  | 3.86                    |
|  | 62          | 27.7                                   | 25.1  | 3.31                    | 25.8                | 24.1     | 3.49                    | 23.9                | 23.1  | 3.67                    | 22.1                | 21.9  | 3.84                    |
|  | 57          | 26.5                                   | 26.5  | 3.25                    | 25.0                | 25.0     | 3.45                    | 23.5                | 23.5  | 3.64                    | 22.0                | 22.0  | 3.83                    |
| 1075   | 72          | 34.1                                   | 17.6  | 3.74                    | 31.8                | 16.8     | 3.93                    | 29.5                | 16.0  | 4.13                    | 27.2                | 15.2  | 4.32                    |
|  | 67          | 31.1                                   | 22.8  | 3.58                    | 29.0                | 22.0     | 3.77                    | 26.8                | 21.1  | 3.96                    | 24.6                | 20.2  | 4.13                    |
|  | 63††        | 28.8                                   | 22.0  | 3.46                    | 26.8                | 21.2     | 3.64                    | 24.7                | 20.3  | 3.82                    | 22.7                | 19.4  | 3.98                    |
|  | 62          | 28.5                                   | 27.4  | 3.44                    | 26.6                | 26.2     | 3.63                    | 24.8                | 24.8  | 3.82                    | 23.1                | 23.1  | 4.01                    |
|  | 57          | 28.0                                   | 28.0  | 3.42                    | 26.4                | 26.4     | 3.62                    | 24.8                | 24.8  | 3.82                    | 23.1                | 23.1  | 4.01                    |
| 1250   | 72          | 34.5                                   | 18.4  | 3.83                    | 32.2                | 17.6     | 4.03                    | 29.8                | 16.8  | 4.22                    | 27.4                | 16.0  | 4.42                    |
|  | 67          | 31.6                                   | 24.3  | 3.67                    | 29.3                | 23.4     | 3.86                    | 27.1                | 22.5  | 4.05                    | 24.9                | 21.6  | 4.23                    |
|  | 63††        | 29.2                                   | 23.4  | 3.55                    | 27.1                | 22.5     | 3.73                    | 25.0                | 21.5  | 3.91                    | 22.9                | 20.6  | 4.08                    |
|  | 62          | 29.1                                   | 28.9  | 3.55                    | 27.3                | 27.3     | 3.74                    | 25.6                | 25.6  | 3.95                    | 23.8                | 23.8  | 4.14                    |
|  | 57          | 29.0                                   | 29.0  | 3.54                    | 27.3                | 27.3     | 3.74                    | 25.6                | 25.6  | 3.95                    | 23.8                | 23.8  | 4.15                    |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| Indoor<br>Section  | Size        | Cooling                                |       | Indoor<br>Section       | Size                | Cooling  |                         |                     |       |                         |                     |       |                         |
|  |             | Capacity                               | Power |                         |                     | Capacity | Power                   |                     |       |                         |                     |       |                         |
| 519D   | 030B        | 1.02                                   | 1.00  | 510B                    | 036                 | 1.01     | 1.02                    |                     |       |                         |                     |       |                         |
| 519E   | 030         | 1.02                                   | 1.00  | 517EN                   | 030                 | 0.97     | 1.01                    |                     |       |                         |                     |       |                         |
|  | 036         | 1.03                                   | 1.03  |                         | 036                 | 1.00     | 1.03                    |                     |       |                         |                     |       |                         |
| 506B   | 030         | 1.00                                   | 1.01  |                         | 031                 | 1.03     | 1.03                    |                     |       |                         |                     |       |                         |
|  | 036         | 1.03                                   | 1.02  | 513C                    | 030                 | 0.99     | 1.02                    |                     |       |                         |                     |       |                         |
| 519C   | 036         | 1.01                                   | 1.02  | 516A                    | 030                 | 1.01     | 1.03                    |                     |       |                         |                     |       |                         |
| 519DS/509AS  | 036B        | 1.03                                   | 1.03  | 617ANA/ANU              | 030                 | 1.00     | 1.00                    |                     |       |                         |                     |       |                         |
| 508A   | 036         | 1.00                                   | 1.01  |                         | 036                 | 0.99     | 1.02                    |                     |       |                         |                     |       |                         |
| 690A031-A Outdoor Section With 617A030 Indoor Section                  |             |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| 1000   | 72          | 34.3                                   | 17.2  | 3.32                    | 32.3                | 16.5     | 3.51                    | 30.3                | 15.8  | 3.70                    | 28.3                | 15.1  | 3.90                    |
|  | 67          | 31.0                                   | 21.9  | 3.19                    | 29.2                | 21.2     | 3.37                    | 27.4                | 20.5  | 3.55                    | 25.4                | 19.7  | 3.74                    |
|  | 63††        | 28.7                                   | 21.2  | 3.09                    | 27.0                | 20.4     | 3.27                    | 25.2                | 19.7  | 3.44                    | 23.3                | 18.9  | 3.61                    |
|  | 62          | 28.2                                   | 26.3  | 3.07                    | 26.5                | 25.4     | 3.24                    | 24.8                | 24.4  | 3.42                    | 23.2                | 23.2  | 3.60                    |
|  | 57          | 27.2                                   | 27.2  | 3.03                    | 25.9                | 25.9     | 3.22                    | 24.5                | 24.5  | 3.41                    | 23.1                | 23.1  | 3.60                    |
| 1125   | 72          | 34.7                                   | 17.9  | 3.40                    | 32.7                | 17.2     | 3.58                    | 30.6                | 16.4  | 3.78                    | 28.6                | 15.7  | 3.97                    |
|  | 67          | 31.5                                   | 23.0  | 3.26                    | 29.6                | 22.3     | 3.44                    | 27.7                | 21.6  | 3.62                    | 25.7                | 20.8  | 3.80                    |
|  | 63††        | 29.1                                   | 22.3  | 3.16                    | 27.3                | 21.5     | 3.33                    | 25.5                | 20.7  | 3.51                    | 23.6                | 19.9  | 3.68                    |
|  | 62          | 28.7                                   | 27.6  | 3.14                    | 27.0                | 26.6     | 3.32                    | 25.3                | 25.3  | 3.50                    | 23.9                | 23.9  | 3.69                    |
|  | 57          | 28.2                                   | 28.2  | 3.12                    | 26.7                | 26.7     | 3.31                    | 25.3                | 25.3  | 3.50                    | 23.8                | 23.8  | 3.69                    |
| 1250   | 72          | 35.1                                   | 18.5  | 3.46                    | 33.0                | 17.8     | 3.65                    | 30.9                | 17.1  | 3.84                    | 28.8                | 16.3  | 4.03                    |
|  | 67          | 31.8                                   | 24.1  | 3.32                    | 29.9                | 23.4     | 3.50                    | 27.9                | 22.6  | 3.69                    | 25.9                | 21.8  | 3.87                    |
|  | 63††        | 29.5                                   | 23.3  | 3.22                    | 27.6                | 22.5     | 3.40                    | 25.7                | 21.6  | 3.57                    | 23.8                | 20.8  | 3.75                    |
|  | 62          | 29.1                                   | 28.8  | 3.21                    | 27.5                | 27.5     | 3.39                    | 26.0                | 26.0  | 3.58                    | 24.4                | 24.4  | 3.78                    |
|  | 57          | 28.9                                   | 28.9  | 3.20                    | 27.5                | 27.5     | 3.39                    | 26.0                | 26.0  | 3.59                    | 24.4                | 24.4  | 3.78                    |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| Indoor<br>Section  | Size        | Cooling                                |       | Indoor<br>Section       | Size                | Cooling  |                         |                     |       |                         |                     |       |                         |
|  |             | Capacity                               | Power |                         |                     | Capacity | Power                   |                     |       |                         |                     |       |                         |
| 519DS  | 030B        | 0.97                                   | 0.98  | 517EN                   | 030                 | 0.93     | 0.99                    |                     |       |                         |                     |       |                         |
| 519DS/509AS  | 036B        | 0.99                                   | 1.00  |                         | 031                 | 0.99     | 1.01                    |                     |       |                         |                     |       |                         |
| 519E   | 030         | 0.97                                   | 0.98  |                         | 036                 | 1.00     | 1.00                    |                     |       |                         |                     |       |                         |
|  | 036         | 0.99                                   | 1.00  | 513C                    | 030                 | 0.95     | 0.99                    |                     |       |                         |                     |       |                         |
| 508A   | 036         | 0.95                                   | 0.99  | 516A                    | 030                 | 0.96     | 1.01                    |                     |       |                         |                     |       |                         |
| 506B   | 030         | 0.95                                   | 0.98  | 617ANA/ANU              | 024††               | 0.95     | 1.01                    |                     |       |                         |                     |       |                         |
|  | 036         | 0.98                                   | 1.00  |                         | 030                 | 0.96     | 1.01                    |                     |       |                         |                     |       |                         |
|  | —           | —                                      | —     |                         | 036                 | 0.97     | 1.01                    |                     |       |                         |                     |       |                         |

See notes on page 15.

# **DETAILED COOLING CAPACITIES\* Continued**

| EVAPORATOR AIR   |             | CONDENSER ENTERING AIR TEMPERATURES °F |                |                         |                     |          |                         |                     |       |                         |                     |       |                         |
|--|-------------|--|----------------|-------------------------|---------------------|----------|-------------------------|---------------------|-------|-------------------------|---------------------|-------|-------------------------|
|  |             | 85                                     |                |                         | 95                  |          |                         | 105                 |       |                         | 115                 |       |                         |
| CFM  | E<br>W<br>B | Capacity<br>MBtu/h†                    |                | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |          | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** |
|  |             | Total                                  | Sens‡          |                         | Total               | Sens‡    |                         | Total               | Sens‡ |                         | Total               | Sens‡ |                         |
| 690A036-A Outdoor Section With 517ENS042 Indoor Section                |             |  |                |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| 1200   | 72          | 41.4                                   | 20.6           | 4.47                    | 39.0                | 19.8     | 4.77                    | 36.7                | 18.9  | 5.06                    | 34.3                | 18.1  | 5.34                    |
|  | 67          | 37.7                                   | 26.4           | 4.33                    | 35.6                | 25.5     | 4.60                    | 33.4                | 24.7  | 4.88                    | 31.2                | 23.8  | 5.15                    |
|  | 63††        | 35.0                                   | 25.6           | 4.21                    | 32.9                | 24.7     | 4.48                    | 30.8                | 23.8  | 4.74                    | 28.8                | 22.9  | 5.00                    |
|  | 62          | 34.5                                   | 31.9           | 4.19                    | 32.5                | 30.9     | 4.46                    | 30.6                | 29.9  | 4.73                    | 28.7                | 28.6  | 5.00                    |
|  | 57          | 33.5                                   | 33.5           | 4.15                    | 31.9                | 31.9     | 4.43                    | 30.3                | 30.3  | 4.71                    | 28.7                | 28.7  | 4.99                    |
| 1350   | 72          | 42.0                                   | 21.4           | 4.57                    | 39.5                | 20.5     | 4.87                    | 37.1                | 19.7  | 5.16                    | 34.6                | 18.9  | 5.45                    |
|  | 67          | 38.3                                   | 27.8           | 4.42                    | 36.0                | 26.9     | 4.71                    | 33.7                | 26.0  | 4.98                    | 31.5                | 25.2  | 5.26                    |
|  | 63††        | 35.4                                   | 26.9           | 4.31                    | 33.3                | 26.0     | 4.58                    | 31.2                | 25.1  | 4.84                    | 29.1                | 24.2  | 5.11                    |
|  | 62          | 35.1                                   | 33.7           | 4.30                    | 33.1                | 32.6     | 4.57                    | 31.3                | 31.2  | 4.84                    | 29.5                | 29.5  | 5.13                    |
|  | 57          | 34.6                                   | 34.6           | 4.28                    | 32.9                | 32.9     | 4.56                    | 31.2                | 31.2  | 4.85                    | 29.5                | 29.5  | 5.13                    |
| 1500   | 72          | 42.3                                   | 22.2           | 4.67                    | 39.8                | 21.3     | 4.97                    | 37.3                | 20.4  | 5.26                    | 34.8                | 19.6  | 5.54                    |
|  | 67          | 38.7                                   | 29.2           | 4.52                    | 36.3                | 28.3     | 4.80                    | 34.0                | 27.3  | 5.08                    | 31.7                | 26.5  | 5.36                    |
|  | 63††        | 35.8                                   | 28.2           | 4.40                    | 33.6                | 27.2     | 4.67                    | 31.5                | 26.3  | 4.94                    | 29.3                | 25.4  | 5.20                    |
|  | 62          | 35.7                                   | 35.2           | 4.40                    | 33.8                | 33.8     | 4.68                    | 32.0                | 32.0  | 4.97                    | 30.2                | 30.2  | 5.26                    |
|  | 57          | 35.5                                   | 35.5           | 4.39                    | 33.8                | 33.8     | 4.68                    | 32.0                | 32.0  | 4.97                    | 30.2                | 30.2  | 5.26                    |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |                |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| Indoor<br>Section  | Size        | Cooling                                |                | Indoor<br>Section       | Size                | Cooling  |                         |                     |       |                         |                     |       |                         |
|  |             | Capacity                               | Power          |                         |                     | Capacity | Power                   |                     |       |                         |                     |       |                         |
| 519CS  | 036         | 0.96                                   | 0.95           | 519E                    | 036                 | 0.98     | 0.95                    |                     |       |                         |                     |       |                         |
|  | 042         | 0.99                                   | 0.97           |                         | 042                 | 0.98     | 0.97                    |                     |       |                         |                     |       |                         |
| 519DS  | 036WB       | 0.98                                   | 0.95           | 508A                    | 036                 | 0.95     | 0.95                    |                     |       |                         |                     |       |                         |
| 519DS/509AS  | 036B        | 0.98                                   | 0.95           | 506B                    | 036                 | 0.98     | 0.97                    |                     |       |                         |                     |       |                         |
|  | 042         | 0.98                                   | 0.97           |                         | 042                 | 0.99     | 0.97                    |                     |       |                         |                     |       |                         |
|  | 042W        | 0.98                                   | 0.97           | 510B                    | 036                 | 0.97     | 0.96                    |                     |       |                         |                     |       |                         |
|  | 043         | 1.01                                   | 0.99           | 517EN                   | 036                 | 0.96     | 0.98                    |                     |       |                         |                     |       |                         |
|  | 043W        | 1.01                                   | 0.99           | 517EN/GNS               | 042                 | 1.00     | 1.00                    |                     |       |                         |                     |       |                         |
|  | 042C        | 1.00                                   | 0.98           |                         | 043                 | 1.01     | 1.01                    |                     |       |                         |                     |       |                         |
|  | —           | —                                      | —              | 617ANA/ANU              | 036                 | 0.97     | 0.98                    |                     |       |                         |                     |       |                         |
|  |             |  | 617ANA/ANU/ANM | 042                     | 1.01                | 0.98     |                         |                     |       |                         |                     |       |                         |
| 690A036-B Outdoor Section With 617A042 Indoor Section                  |             |  |                |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| 1200   | 72          | 41.1                                   | 20.9           | 4.02                    | 38.5                | 20.0     | 4.23                    | 35.9                | 19.0  | 4.44                    | 33.3                | 18.1  | 4.64                    |
|  | 67          | 37.5                                   | 26.9           | 3.88                    | 35.0                | 26.0     | 4.08                    | 32.6                | 25.0  | 4.28                    | 30.2                | 24.0  | 4.47                    |
|  | 63††        | 34.6                                   | 26.0           | 3.77                    | 32.3                | 25.0     | 3.96                    | 30.0                | 24.0  | 4.15                    | 27.6                | 23.0  | 4.33                    |
|  | 62          | 34.2                                   | 32.4           | 3.75                    | 32.0                | 31.1     | 3.95                    | 29.9                | 29.7  | 4.14                    | 27.9                | 27.9  | 4.35                    |
|  | 57          | 33.4                                   | 33.4           | 3.72                    | 31.6                | 31.6     | 3.93                    | 29.8                | 29.8  | 4.14                    | 27.9                | 27.9  | 4.34                    |
| 1350   | 72          | 41.6                                   | 21.6           | 4.10                    | 38.9                | 20.7     | 4.32                    | 36.3                | 19.8  | 4.53                    | 33.6                | 18.9  | 4.73                    |
|  | 67          | 37.9                                   | 28.3           | 3.96                    | 35.4                | 27.3     | 4.16                    | 32.9                | 26.3  | 4.36                    | 30.4                | 25.3  | 4.56                    |
|  | 63††        | 35.0                                   | 27.3           | 3.85                    | 32.6                | 26.3     | 4.04                    | 30.3                | 25.2  | 4.23                    | 27.9                | 24.2  | 4.42                    |
|  | 62          | 34.8                                   | 33.9           | 3.84                    | 32.6                | 32.4     | 4.04                    | 30.6                | 30.6  | 4.25                    | 28.6                | 28.6  | 4.46                    |
|  | 57          | 34.4                                   | 34.4           | 3.82                    | 32.5                | 32.5     | 4.04                    | 30.6                | 30.6  | 4.25                    | 28.6                | 28.6  | 4.46                    |
| 1500   | 72          | 41.9                                   | 22.4           | 4.19                    | 39.2                | 21.4     | 4.40                    | 36.5                | 20.5  | 4.61                    | 33.7                | 19.6  | 4.81                    |
|  | 67          | 38.2                                   | 29.6           | 4.04                    | 35.7                | 28.5     | 4.24                    | 33.1                | 27.5  | 4.44                    | 30.6                | 26.5  | 4.64                    |
|  | 63††        | 35.3                                   | 28.4           | 3.93                    | 32.9                | 27.4     | 4.12                    | 30.5                | 26.3  | 4.31                    | 28.1                | 25.2  | 4.50                    |
|  | 62          | 35.3                                   | 35.1           | 3.93                    | 33.2                | 33.2     | 4.14                    | 31.2                | 31.2  | 4.35                    | 29.2                | 29.2  | 4.57                    |
|  | 57          | 35.2                                   | 35.2           | 3.93                    | 33.2                | 33.2     | 4.14                    | 31.3                | 31.3  | 4.35                    | 29.2                | 29.2  | 4.56                    |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |                |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| Indoor<br>Section  | Size        | Cooling                                |                | Indoor<br>Section       | Size                | Cooling  |                         |                     |       |                         |                     |       |                         |
|  |             | Capacity                               | Power          |                         |                     | Capacity | Power                   |                     |       |                         |                     |       |                         |
| 519CS  | 036         | 0.97                                   | 0.96           | 508A                    | 036                 | 0.96     | 0.96                    |                     |       |                         |                     |       |                         |
|  | 042         | 1.00                                   | 0.98           |                         | 506B                | 036      | 0.99                    | 0.98                |       |                         |                     |       |                         |
| 519DS/509AS  | 036B        | 0.99                                   | 0.97           | 510B                    | 042                 | 0.99     | 0.98                    |                     |       |                         |                     |       |                         |
|  | 042         | 0.99                                   | 0.98           |                         | 036                 | 0.98     | 0.97                    |                     |       |                         |                     |       |                         |
|  | 142         | 0.99                                   | 0.98           | 517EN                   | 036                 | 0.97     | 0.99                    |                     |       |                         |                     |       |                         |
|  | 043         | 1.02                                   | 1.00           | 517E/GNS                | 042                 | 1.01     | 1.02                    |                     |       |                         |                     |       |                         |
|  | 143         | 1.02                                   | 1.00           |                         | 043                 | 1.01     | 1.03                    |                     |       |                         |                     |       |                         |
|  | 242         | 1.01                                   | 1.00           | 617ANA/ANU              | 030††               | 0.96     | 0.99                    |                     |       |                         |                     |       |                         |
|  | 519E        | 036                                    | 0.99           | 0.97                    | 617ANA/ANU/ANM      | 036      | 0.98                    | 0.99                |       |                         |                     |       |                         |
| 042  |             | 0.99                                   | 0.98           | 042                     |                     | 1.00     | 1.00                    |                     |       |                         |                     |       |                         |

See notes on page 15.

# DETAILED COOLING CAPACITIES\* Continued

| EVAPORATOR<br>AIR  |   | CONDENSER ENTERING AIR TEMPERATURES °F |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
|--|---|--|-------|-------------------------|---------------------|----------|-------------------------|---------------------|-------|-------------------------|---------------------|-------|-------------------------|
|  |   | 85                                     |       |                         | 95                  |          |                         | 105                 |       |                         | 115                 |       |                         |
| CFM  | E<br>W<br>B   | Capacity<br>MBtu/h†                    |       | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |          | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** |
|  |   | Total                                  | Sens‡ |                         | Total               | Sens‡    |                         | Total               | Sens‡ |                         | Total               | Sens‡ |                         |
| 690A042-A Outdoor Section With 517E/GNS042 Indoor Section              |   |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| 1400   | 72  | 46.4                                   | 23.1  | 5.12                    | 43.8                | 22.2     | 5.45                    | 41.2                | 21.2  | 5.77                    | 38.6                | 20.3  | 6.09                    |
|  | 67  | 42.4                                   | 29.5  | 4.94                    | 40.0                | 28.6     | 5.25                    | 37.5                | 27.6  | 5.56                    | 35.1                | 26.6  | 5.87                    |
|  | 63††  | 39.3                                   | 28.6  | 4.80                    | 37.0                | 27.6     | 5.10                    | 34.7                | 26.6  | 5.39                    | 32.4                | 25.6  | 5.69                    |
|  | 62  | 38.7                                   | 35.7  | 4.77                    | 36.5                | 34.6     | 5.07                    | 34.4                | 33.4  | 5.38                    | 32.3                | 32.1  | 5.68                    |
|  | 57  | 37.6                                   | 37.6  | 4.72                    | 35.8                | 35.8     | 5.04                    | 34.0                | 34.0  | 5.35                    | 32.2                | 32.2  | 5.67                    |
| 1575   | 72  | 47.0                                   | 24.0  | 5.24                    | 44.4                | 23.0     | 5.56                    | 41.7                | 22.0  | 5.89                    | 38.9                | 21.1  | 6.21                    |
|  | 67  | 43.0                                   | 31.1  | 5.05                    | 40.5                | 30.1     | 5.36                    | 38.0                | 29.1  | 5.68                    | 35.4                | 28.1  | 5.98                    |
|  | 63††  | 39.8                                   | 30.0  | 4.91                    | 37.5                | 29.0     | 5.21                    | 35.1                | 28.0  | 5.51                    | 32.7                | 27.0  | 5.80                    |
|  | 62  | 39.4                                   | 37.7  | 4.89                    | 37.2                | 36.4     | 5.20                    | 35.1                | 34.9  | 5.51                    | 33.1                | 33.1  | 5.83                    |
|  | 57  | 38.8                                   | 38.8  | 4.86                    | 36.9                | 36.9     | 5.18                    | 35.0                | 35.0  | 5.51                    | 33.1                | 33.1  | 5.83                    |
| 1750   | 72  | 47.5                                   | 24.7  | 5.34                    | 44.7                | 23.8     | 5.67                    | 42.0                | 22.8  | 6.00                    | 39.2                | 21.9  | 6.32                    |
|  | 67  | 43.4                                   | 32.5  | 5.16                    | 40.9                | 31.5     | 5.47                    | 38.3                | 30.5  | 5.78                    | 35.7                | 29.5  | 6.09                    |
|  | 63††  | 40.2                                   | 31.4  | 5.01                    | 37.8                | 30.4     | 5.32                    | 35.4                | 29.3  | 5.61                    | 33.0                | 28.3  | 5.91                    |
|  | 62  | 40.1                                   | 39.3  | 5.00                    | 37.9                | 37.8     | 5.32                    | 35.9                | 35.9  | 5.64                    | 33.9                | 33.9  | 5.97                    |
|  | 57  | 39.8                                   | 39.8  | 5.00                    | 37.9                | 37.9     | 5.32                    | 35.9                | 35.9  | 5.64                    | 33.9                | 33.9  | 5.97                    |
| Multipliers for Determining the Performance With Other Indoor Sections |   |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| Indoor<br>Section  | Size  | Cooling                                |       | Indoor<br>Section       | Size                | Cooling  |                         |                     |       |                         |                     |       |                         |
|  |   | Capacity                               | Power |                         |                     | Capacity | Power                   |                     |       |                         |                     |       |                         |
| 519CS  | 042   | 0.99                                   | 0.96  | 519E                    | 042                 | 0.99     | 0.97                    |                     |       |                         |                     |       |                         |
|  | 048   | 0.98                                   | 0.97  |                         | 048                 | 1.00     | 0.98                    |                     |       |                         |                     |       |                         |
| 519DS  | 048   | 1.00                                   | 0.98  | 508A                    | 048                 | 1.00     | 0.98                    |                     |       |                         |                     |       |                         |
|  | 049   | 1.04                                   | 1.00  |                         | 042                 | 0.96     | 0.96                    |                     |       |                         |                     |       |                         |
| 519DS/509AS  | 048C  | 1.02                                   | 0.99  | 506B                    | 049                 | 1.04     | 0.99                    |                     |       |                         |                     |       |                         |
|  | 042   | 0.99                                   | 0.97  |                         | 048                 | 1.01     | 0.99                    |                     |       |                         |                     |       |                         |
|  | 042W  | 0.98                                   | 0.97  | 517E/GNS                | 042                 | 1.00     | 1.00                    |                     |       |                         |                     |       |                         |
|  | 043   | 1.02                                   | 0.99  |                         | 043                 | 1.02     | 1.01                    |                     |       |                         |                     |       |                         |
|  | 043W  | 1.02                                   | 0.99  |                         | 048                 | 1.01     | 1.00                    |                     |       |                         |                     |       |                         |
|  | 042C  | 1.01                                   | 0.98  |                         | 049                 | 1.04     | 1.01                    |                     |       |                         |                     |       |                         |
|  | 048W  | 1.00                                   | 0.98  |                         | —                   | —        | —                       |                     |       |                         |                     |       |                         |
|  |   |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
|  | 690A042-B Outdoor Section With 517E/GNS042 Indoor Section |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| 1400   | 72  | 47.1                                   | 23.5  | 5.16                    | 44.4                | 22.5     | 5.46                    | 41.7                | 21.5  | 5.76                    | 38.8                | 20.5  | 6.04                    |
|  | 67  | 43.0                                   | 30.0  | 4.96                    | 40.5                | 29.0     | 5.24                    | 37.9                | 27.9  | 5.53                    | 35.2                | 26.9  | 5.80                    |
|  | 63††  | 39.8                                   | 29.1  | 4.81                    | 37.4                | 28.0     | 5.08                    | 34.9                | 26.9  | 5.35                    | 32.4                | 25.9  | 5.61                    |
|  | 62  | 39.3                                   | 36.3  | 4.78                    | 37.0                | 35.1     | 5.06                    | 34.6                | 33.8  | 5.33                    | 32.4                | 32.3  | 5.61                    |
|  | 57  | 38.2                                   | 38.2  | 4.73                    | 36.3                | 36.3     | 5.02                    | 34.3                | 34.3  | 5.32                    | 32.4                | 32.4  | 5.61                    |
| 1575   | 72  | 47.8                                   | 24.4  | 5.28                    | 45.0                | 23.3     | 5.57                    | 42.1                | 22.3  | 5.87                    | 39.2                | 21.3  | 6.16                    |
|  | 67  | 43.6                                   | 31.6  | 5.08                    | 41.0                | 30.5     | 5.36                    | 38.3                | 29.5  | 5.65                    | 35.6                | 28.4  | 5.92                    |
|  | 63††  | 40.4                                   | 30.5  | 4.92                    | 37.9                | 29.5     | 5.20                    | 35.3                | 28.4  | 5.47                    | 32.8                | 27.3  | 5.73                    |
|  | 62  | 40.0                                   | 38.3  | 4.90                    | 37.7                | 36.9     | 5.18                    | 35.4                | 35.3  | 5.47                    | 33.3                | 33.3  | 5.76                    |
|  | 57  | 39.4                                   | 39.4  | 4.88                    | 37.4                | 37.4     | 5.17                    | 35.4                | 35.4  | 5.47                    | 33.3                | 33.3  | 5.77                    |
| 1750   | 72  | 48.2                                   | 25.2  | 5.38                    | 45.4                | 24.2     | 5.69                    | 42.4                | 23.1  | 5.98                    | 39.5                | 22.1  | 6.27                    |
|  | 67  | 44.1                                   | 33.1  | 5.19                    | 41.4                | 32.0     | 5.47                    | 38.7                | 30.9  | 5.75                    | 35.9                | 29.9  | 6.03                    |
|  | 63††  | 40.8                                   | 31.9  | 5.03                    | 38.2                | 30.8     | 5.30                    | 35.6                | 29.7  | 5.58                    | 33.0                | 28.6  | 5.84                    |
|  | 62  | 40.7                                   | 40.0  | 5.02                    | 38.4                | 38.3     | 5.31                    | 36.2                | 36.2  | 5.61                    | 34.1                | 34.1  | 5.91                    |
|  | 57  | 40.4                                   | 40.4  | 5.01                    | 38.4                | 38.4     | 5.31                    | 36.2                | 36.2  | 5.61                    | 34.1                | 34.1  | 5.91                    |
| Multipliers for Determining the Performance With Other Indoor Sections |   |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| Indoor<br>Section  | Size  | Cooling                                |       | Indoor<br>Section       | Size                | Cooling  |                         |                     |       |                         |                     |       |                         |
|  |   | Capacity                               | Power |                         |                     | Capacity | Power                   |                     |       |                         |                     |       |                         |
| 519CS  | 042   | 0.99                                   | 0.96  | 519E                    | 042                 | 0.99     | 0.97                    |                     |       |                         |                     |       |                         |
|  | 048   | 0.98                                   | 0.97  |                         | 048                 | 1.00     | 0.98                    |                     |       |                         |                     |       |                         |
| 519DS  | 048   | 1.00                                   | 0.98  | 508A                    | 048                 | 1.00     | 0.98                    |                     |       |                         |                     |       |                         |
|  | 049   | 1.02                                   | 1.00  |                         | 042                 | 0.96     | 0.96                    |                     |       |                         |                     |       |                         |
| 519DS/509AS  | 248   | 1.02                                   | 0.99  | 506B                    | 049                 | 1.02     | 0.99                    |                     |       |                         |                     |       |                         |
|  | 042   | 0.99                                   | 0.97  |                         | 048                 | 1.01     | 0.99                    |                     |       |                         |                     |       |                         |
|  | 142   | 0.98                                   | 0.97  | 517E/GNS                | 042                 | 1.00     | 1.00                    |                     |       |                         |                     |       |                         |
|  | 043   | 1.02                                   | 0.99  |                         | 043                 | 1.02     | 1.01                    |                     |       |                         |                     |       |                         |
|  | 143   | 1.02                                   | 0.99  |                         | 048                 | 1.01     | 1.00                    |                     |       |                         |                     |       |                         |
|  | 242   | 1.01                                   | 0.98  |                         | 049                 | 1.02     | 1.01                    |                     |       |                         |                     |       |                         |
|  | 148   | 1.00                                   | 0.98  |                         | 617ANA/ANU          | 036††    | 0.98                    | 1.00                |       |                         |                     |       |                         |
|  | —   | —                                      | —     |                         | 617ANA/ANU/ANM      | 042      | 1.02                    | 0.99                |       |                         |                     |       |                         |
|  | —   | —                                      | —     |                         | 048                 | 1.04     | 1.00                    |                     |       |                         |                     |       |                         |

See notes on page 15.

# **DETAILED COOLING CAPACITIES\* Continued**

| EVAPORATOR AIR   |             | CONDENSER ENTERING AIR TEMPERATURES °F |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
|--|-------------|--|-------|-------------------------|---------------------|----------|-------------------------|---------------------|-------|-------------------------|---------------------|-------|-------------------------|
| AIR  |             | 85                                     |       |                         | 95                  |          |                         | 105                 |       |                         | 115                 |       |                         |
| CFM  | E<br>W<br>B | Capacity<br>MBtu/h†                    |       | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |          | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** | Capacity<br>MBtu/h† |       | Total<br>System<br>Kw** |
|  |             | Total                                  | Sens‡ |                         | Total               | Sens‡    |                         | Total               | Sens‡ |                         | Total               | Sens‡ |                         |
| 690A048-B Outdoor Section With 517E/GNS048 Indoor Section              |             |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| 1600   | 72          | 53.7                                   | 26.3  | 5.82                    | 50.7                | 25.2     | 6.15                    | 47.7                | 24.1  | 6.47                    | 44.6                | 22.9  | 6.77                    |
|  | 67          | 49.1                                   | 33.5  | 5.63                    | 46.3                | 32.3     | 5.94                    | 43.6                | 31.1  | 6.24                    | 40.8                | 30.0  | 6.52                    |
|  | 63††        | 45.4                                   | 32.4  | 5.47                    | 42.7                | 31.2     | 5.76                    | 40.2                | 30.0  | 6.05                    | 37.5                | 28.9  | 6.32                    |
|  | 62          | 44.8                                   | 40.4  | 5.44                    | 42.3                | 39.1     | 5.74                    | 39.8                | 37.8  | 6.02                    | 37.3                | 36.4  | 6.30                    |
|  | 57          | 43.1                                   | 43.1  | 5.37                    | 41.1                | 41.1     | 5.68                    | 39.1                | 39.1  | 5.98                    | 37.0                | 37.0  | 6.28                    |
| 1800   | 72          | 54.4                                   | 27.2  | 5.96                    | 51.3                | 26.1     | 6.28                    | 48.2                | 25.0  | 6.60                    | 45.0                | 23.8  | 6.90                    |
|  | 67          | 49.8                                   | 35.1  | 5.76                    | 47.0                | 33.9     | 6.07                    | 44.1                | 32.8  | 6.38                    | 41.2                | 31.7  | 6.67                    |
|  | 63††        | 46.0                                   | 33.9  | 5.60                    | 43.3                | 32.7     | 5.89                    | 40.7                | 31.6  | 6.18                    | 37.9                | 30.4  | 6.45                    |
|  | 62          | 45.6                                   | 42.6  | 5.58                    | 43.1                | 41.3     | 5.88                    | 40.6                | 39.8  | 6.17                    | 38.1                | 38.0  | 6.46                    |
|  | 57          | 44.5                                   | 44.5  | 5.53                    | 42.4                | 42.4     | 5.85                    | 40.3                | 40.3  | 6.16                    | 38.1                | 38.1  | 6.46                    |
| 2000   | 72          | 54.9                                   | 28.0  | 6.08                    | 51.8                | 26.9     | 6.41                    | 48.6                | 25.8  | 6.73                    | 45.4                | 24.6  | 7.03                    |
|  | 67          | 50.4                                   | 36.7  | 5.89                    | 47.5                | 35.5     | 6.20                    | 44.5                | 34.3  | 6.50                    | 41.5                | 33.1  | 6.79                    |
|  | 63††        | 46.6                                   | 35.4  | 5.73                    | 43.8                | 34.2     | 6.02                    | 41.0                | 33.0  | 6.31                    | 38.2                | 31.7  | 6.57                    |
|  | 62          | 46.3                                   | 44.6  | 5.71                    | 43.8                | 43.1     | 6.02                    | 41.3                | 41.2  | 6.32                    | 39.0                | 39.0  | 6.63                    |
|  | 57          | 45.7                                   | 45.7  | 5.69                    | 43.5                | 43.5     | 6.01                    | 41.3                | 41.3  | 6.32                    | 39.0                | 39.0  | 6.63                    |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| Indoor<br>Section  | Size        | Cooling                                |       | Indoor<br>Section       | Size                | Cooling  |                         |                     |       |                         |                     |       |                         |
|  |             | Capacity                               | Power |                         |                     | Capacity | Power                   |                     |       |                         |                     |       |                         |
| 519CS  | 048         | 0.96                                   | 0.94  | 508A                    | 048                 | 0.98     | 0.95                    |                     |       |                         |                     |       |                         |
|  | 060         | 0.96                                   | 0.94  | 506B                    | 049                 | 1.00     | 0.98                    |                     |       |                         |                     |       |                         |
| 519DS  | 048         | 0.99                                   | 0.97  | 510B                    | 061                 | 1.02     | 1.00                    |                     |       |                         |                     |       |                         |
|  | 049         | 1.01                                   | 0.98  |                         | 048                 | 1.00     | 0.97                    |                     |       |                         |                     |       |                         |
| 519DS/509AS  | 048C        | 1.00                                   | 0.96  | 517E/GNS                | 060                 | 1.01     | 0.99                    |                     |       |                         |                     |       |                         |
|  | 048W        | 0.99                                   | 0.97  |                         | 048                 | 1.00     | 1.00                    |                     |       |                         |                     |       |                         |
|  | 057C        | 1.01                                   | 0.98  |                         | 049                 | 1.01     | 1.02                    |                     |       |                         |                     |       |                         |
|  | 060         | 1.02                                   | 0.99  |                         | 060                 | 1.00     | 1.05                    |                     |       |                         |                     |       |                         |
|  | 061         | 1.03                                   | 1.00  |                         | 062                 | 1.01     | 1.03                    |                     |       |                         |                     |       |                         |
| 519E   | 048         | 0.99                                   | 0.97  | 617ANA/ANU/ANM          | 063                 | 1.02     | 1.04                    |                     |       |                         |                     |       |                         |
|  | 060         | 1.01                                   | 0.98  |                         | 048                 | 1.00     | 0.99                    |                     |       |                         |                     |       |                         |
|  | —           | —                                      | —     |                         | 060                 | 1.01     | 1.03                    |                     |       |                         |                     |       |                         |
| 690A048-D Outdoor Section With 517E/GNS048 Indoor Section              |             |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| 1600   | 72          | 55.6                                   | 27.7  | 5.47                    | 52.3                | 26.5     | 5.76                    | 49.0                | 25.3  | 6.04                    | 45.4                | 24.0  | 6.32                    |
|  | 67          | 50.3                                   | 35.2  | 5.26                    | 47.2                | 33.9     | 5.54                    | 43.9                | 32.6  | 5.80                    | 40.7                | 31.4  | 6.05                    |
|  | 63          | 46.3                                   | 34.0  | 5.11                    | 43.4                | 32.7     | 5.37                    | 40.3                | 31.4  | 5.62                    | 37.2                | 30.1  | 5.85                    |
|  | 62          | 45.4                                   | 42.3  | 5.08                    | 42.6                | 40.9     | 5.34                    | 39.8                | 39.3  | 5.59                    | 37.1                | 37.1  | 5.85                    |
|  | 57          | 44.1                                   | 44.1  | 5.03                    | 41.9                | 41.9     | 5.31                    | 39.5                | 39.5  | 5.58                    | 37.1                | 37.1  | 5.85                    |
| 1700   | 72          | 56.1                                   | 28.3  | 5.54                    | 52.7                | 27.0     | 5.83                    | 49.3                | 25.8  | 6.11                    | 45.7                | 24.6  | 6.38                    |
|  | 67          | 50.7                                   | 36.1  | 5.33                    | 47.5                | 34.9     | 5.61                    | 44.3                | 33.6  | 5.87                    | 40.9                | 32.3  | 6.12                    |
|  | 63          | 46.7                                   | 34.9  | 5.18                    | 43.7                | 33.6     | 5.44                    | 40.6                | 32.2  | 5.69                    | 37.4                | 30.9  | 5.92                    |
|  | 62          | 45.9                                   | 43.6  | 5.15                    | 43.1                | 42.1     | 5.41                    | 40.3                | 40.2  | 5.67                    | 37.8                | 37.8  | 5.94                    |
|  | 57          | 44.9                                   | 44.9  | 5.11                    | 42.6                | 42.6     | 5.39                    | 40.2                | 40.2  | 5.67                    | 37.7                | 37.7  | 5.94                    |
| 1800   | 72          | 56.5                                   | 28.8  | 5.61                    | 53.1                | 27.6     | 5.90                    | 49.6                | 26.4  | 6.18                    | 45.9                | 25.1  | 6.45                    |
|  | 67          | 51.1                                   | 37.1  | 5.39                    | 47.9                | 35.8     | 5.67                    | 44.5                | 34.5  | 5.94                    | 41.1                | 33.2  | 6.18                    |
|  | 63          | 47.1                                   | 35.8  | 5.24                    | 44.0                | 34.4     | 5.50                    | 40.8                | 33.1  | 5.75                    | 37.7                | 31.8  | 5.98                    |
|  | 62          | 46.3                                   | 44.8  | 5.21                    | 43.5                | 43.1     | 5.48                    | 40.9                | 40.9  | 5.75                    | 38.4                | 38.4  | 6.02                    |
|  | 57          | 45.7                                   | 45.7  | 5.19                    | 43.3                | 43.3     | 5.47                    | 40.9                | 40.9  | 5.75                    | 38.3                | 38.3  | 6.02                    |
| 2000   | 72          | 57.2                                   | 29.8  | 5.73                    | 53.7                | 28.6     | 6.02                    | 50.1                | 27.4  | 6.30                    | 46.4                | 26.2  | 6.57                    |
|  | 67          | 51.7                                   | 38.9  | 5.52                    | 48.4                | 37.6     | 5.79                    | 45.0                | 36.4  | 6.06                    | 41.6                | 35.0  | 6.31                    |
|  | 63          | 47.7                                   | 37.5  | 5.36                    | 44.5                | 36.2     | 5.62                    | 41.3                | 34.8  | 5.88                    | 38.0                | 33.4  | 6.11                    |
|  | 62          | 47.2                                   | 46.9  | 5.34                    | 44.6                | 44.6     | 5.63                    | 42.0                | 42.0  | 5.91                    | 39.3                | 39.3  | 6.18                    |
|  | 57          | 47.1                                   | 47.1  | 5.34                    | 44.6                | 44.6     | 5.63                    | 42.0                | 42.0  | 5.91                    | 39.4                | 39.4  | 6.18                    |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |       |                         |                     |          |                         |                     |       |                         |                     |       |                         |
| Indoor<br>Section  | Size        | Cooling                                |       | Indoor<br>Section       | Size                | Cooling  |                         |                     |       |                         |                     |       |                         |
|  |             | Capacity                               | Power |                         |                     | Capacity | Power                   |                     |       |                         |                     |       |                         |
| 519CS  | 048         | 0.94                                   | 0.94  | 519E                    | 060                 | 0.99     | 0.98                    |                     |       |                         |                     |       |                         |
| 519DS  | 048         | 0.96                                   | 0.97  | 506B                    | 061                 | 1.01     | 0.99                    |                     |       |                         |                     |       |                         |
| 519D   | 049         | 1.00                                   | 0.98  | 510B                    | 060                 | 1.00     | 0.99                    |                     |       |                         |                     |       |                         |
|  | 048C        | 0.98                                   | 0.97  |                         | 048                 | 0.97     | 0.99                    |                     |       |                         |                     |       |                         |
| 519E   | 048         | 0.96                                   | 0.97  |                         | 049                 | 1.00     | 1.00                    |                     |       |                         |                     |       |                         |
| 508A   | 048         | 0.96                                   | 0.96  |                         | 060                 | 0.99     | 1.05                    |                     |       |                         |                     |       |                         |
| 506B   | 049         | 0.99                                   | 0.98  |                         | 062                 | 1.00     | 1.03                    |                     |       |                         |                     |       |                         |
| 510B   | 048         | 0.98                                   | 0.97  |                         | 063                 | 1.01     | 1.04                    |                     |       |                         |                     |       |                         |
| 519C   | 060         | 0.99                                   | 0.97  | 617ANA/ANU/ANM          | 042††               | 0.96     | 0.98                    |                     |       |                         |                     |       |                         |
| 519DS/509AS  | 048W        | 0.96                                   | 0.97  |                         | 048                 | 0.99     | 0.95                    |                     |       |                         |                     |       |                         |
|  | 057C        | 0.99                                   | 0.98  |                         | 060                 | 1.00     | 0.98                    |                     |       |                         |                     |       |                         |
|  | 060         | 1.00                                   | 0.99  |                         | —                   | —        | —                       |                     |       |                         |                     |       |                         |
|  | 061         | 1.01                                   | 0.99  |                         | —                   | —        | —                       |                     |       |                         |                     |       |                         |

See notes on page 15.



# DETAILED COOLING CAPACITIES\* Continued

| EVAPORATOR AIR   |             | CONDENSER ENTERING AIR TEMPERATURES °F |       |                      |                  |          |                   |                  |       |                   |                  |       |                   |
|--|-------------|--|-------|----------------------|------------------|----------|-------------------|------------------|-------|-------------------|------------------|-------|-------------------|
| AIR  |             | 85                                     |       |                      | 95               |          |                   | 105              |       |                   | 115              |       |                   |
| CFM  | E<br>W<br>B | Capacity MBtuht†                       |       | Total System Kw**    | Capacity MBtuht† |          | Total System Kw** | Capacity MBtuht† |       | Total System Kw** | Capacity MBtuht† |       | Total System Kw** |
|  |             | Total                                  | Sens‡ |                      | Total            | Sens‡    |                   | Total            | Sens‡ |                   | Total            | Sens‡ |                   |
| 690A060-A Outdoor Section With 517E/GNS062 Indoor Section              |             |  |       |                      |                  |          |                   |                  |       |                   |                  |       |                   |
| 1800   | 72          | 65.1                                   | 32.2  | 7.02                 | 61.5             | 30.9     | 7.39              | 57.8             | 29.5  | 7.74              | 54.1             | 28.2  | 8.10              |
|  | 67          | 59.6                                   | 41.4  | 6.76                 | 56.2             | 40.0     | 7.12              | 52.9             | 38.6  | 7.46              | 49.5             | 37.3  | 7.79              |
|  | 63††        | 55.1                                   | 40.1  | 6.56                 | 51.9             | 38.7     | 6.90              | 48.8             | 37.3  | 7.22              | 45.7             | 35.9  | 7.52              |
|  | 62          | 54.5                                   | 50.1  | 6.53                 | 51.6             | 48.6     | 6.87              | 48.6             | 47.0  | 7.20              | 45.7             | 45.3  | 7.53              |
|  | 57          | 53.0                                   | 53.0  | 6.46                 | 50.6             | 50.6     | 6.82              | 48.1             | 48.1  | 7.18              | 45.6             | 45.6  | 7.53              |
| 2000   | 72          | 65.7                                   | 33.3  | 7.16                 | 62.0             | 31.9     | 7.53              | 58.3             | 30.5  | 7.89              | 54.5             | 29.3  | 8.25              |
|  | 67          | 60.3                                   | 43.3  | 6.91                 | 56.9             | 41.9     | 7.26              | 53.4             | 40.6  | 7.61              | 50.0             | 39.2  | 7.95              |
|  | 63††        | 55.8                                   | 41.9  | 6.70                 | 52.5             | 40.5     | 7.04              | 49.3             | 39.1  | 7.37              | 46.1             | 37.7  | 7.68              |
|  | 62          | 55.5                                   | 52.7  | 6.68                 | 52.5             | 51.1     | 7.03              | 49.5             | 49.2  | 7.37              | 46.8             | 46.8  | 7.72              |
|  | 57          | 54.6                                   | 54.6  | 6.64                 | 52.0             | 52.0     | 7.01              | 49.4             | 49.4  | 7.37              | 46.8             | 46.8  | 7.73              |
| 2050   | 72          | 65.9                                   | 33.5  | 7.19                 | 62.2             | 32.2     | 7.57              | 58.4             | 30.8  | 7.93              | 54.6             | 29.5  | 8.29              |
|  | 67          | 60.4                                   | 43.8  | 6.94                 | 57.0             | 42.4     | 7.30              | 53.5             | 41.0  | 7.64              | 50.1             | 39.7  | 7.99              |
|  | 63††        | 55.9                                   | 42.3  | 6.73                 | 52.6             | 40.9     | 7.08              | 49.4             | 39.5  | 7.40              | 46.2             | 38.1  | 7.72              |
|  | 62          | 55.7                                   | 53.3  | 6.72                 | 52.7             | 51.6     | 7.07              | 49.7             | 49.6  | 7.42              | 47.0             | 47.0  | 7.77              |
|  | 57          | 54.9                                   | 54.9  | 6.69                 | 52.3             | 52.3     | 7.06              | 49.7             | 49.7  | 7.42              | 47.0             | 47.0  | 7.78              |
| 2200   | 72          | 66.2                                   | 34.3  | 7.29                 | 62.5             | 32.9     | 7.67              | 58.6             | 31.5  | 8.03              | 54.8             | 30.2  | 8.38              |
|  | 67          | 60.9                                   | 45.2  | 7.04                 | 57.4             | 43.8     | 7.40              | 53.8             | 42.4  | 7.75              | 50.4             | 41.0  | 8.09              |
|  | 63††        | 56.3                                   | 43.6  | 6.84                 | 53.0             | 42.2     | 7.18              | 49.7             | 40.7  | 7.50              | 46.4             | 39.3  | 7.83              |
|  | 62          | 56.3                                   | 55.0  | 6.83                 | 53.3             | 53.0     | 7.19              | 50.5             | 50.5  | 7.55              | 47.7             | 47.7  | 7.91              |
|  | 57          | 55.9                                   | 55.9  | 6.82                 | 53.2             | 53.2     | 7.19              | 50.5             | 50.5  | 7.55              | 47.7             | 47.7  | 7.91              |
| Multipliers for Determining the Performance With Other Indoor Sections |             |  |       |                      |                  |          |                   |                  |       |                   |                  |       |                   |
| Indoor Section   | Size        | Cooling                                |       | Indoor Section       | Size             | Cooling  |                   |                  |       |                   |                  |       |                   |
|  |             | Capacity                               | Power |                      |                  | Capacity | Power             |                  |       |                   |                  |       |                   |
| 519CS  | 060         | 0.96                                   | 0.91  | 510B                 | 060              | 1.01     | 0.96              |                  |       |                   |                  |       |                   |
| 519DS/509AS  | 057C        | 0.97                                   | 0.95  | 517E/GNS             | 060              | 0.98     | 1.02              |                  |       |                   |                  |       |                   |
|  | 060         | 1.01                                   | 0.96  |                      | 062              | 1.02     | 1.01              |                  |       |                   |                  |       |                   |
|  | 061         | 1.01                                   | 0.97  |                      | 063              | 1.00     | 1.00              |                  |       |                   |                  |       |                   |
| 519E   | 060         | 0.97                                   | 0.95  | 517E &<br>315016-401 | 005              | 1.03     | 1.02              |                  |       |                   |                  |       |                   |
| 506B   | 061         | 1.02                                   | 0.97  |                      | 617ANA/ANU/ANM   | 048††    | 0.94              | 1.00             |       |                   |                  |       |                   |
|  | —           | —                                      | —     |                      |                  | 060      | 0.97              | 1.00             |       |                   |                  |       |                   |

\* Detailed cooling capacities are based on indoor and outdoor unit at the same elevation and connected by 25 feet (7.62m) of tubing. If other than 25 feet (7.62m) of tubing is used and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

† Total and sensible capacities are net capacities. Blower motor heat has been subtracted.

‡ Sensible capacities shown are based on 80°F (27°C) entering air at the indoor coil. For sensible capacities at other than 80°F (27°C), deduct 835 Btu/h (245kw) per 1000 cfm (480L/S) of indoor coil air for each degree below 80°F (27°C), or add 835 Btu/h (245kw) per 1000 cfm (480L/S) of indoor coil air per degree above 80°F (27°C).

\*\* System kw is total of indoor and outdoor unit kilowatts.

†† At TVA rating indoor condition (75 edb/63 ewb). All other indoor air temperatures are at 80 edb.

‡‡ See page 20 for fan coil downsizing requirements.

# HEAT PUMP HEATING PERFORMANCE

| INDOOR AIR   |      | OUTDOOR COIL ENTERING AIR TEMPERATURE °F |          |             |               |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|--|------|--|----------|-------------|---------------|--------|----------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|----|--|--|--|
|  |      | - 3                                      |          |             |               | 7      |                |               |        | 17          |               |        |             | 27            |        |             |               | 37     |             |               |        | 47          |               |        |             | 57 |  |  |  |
| E<br>D<br>B  | CFM  | Capacity (Kw)                            |          | Total Power | Capacity (Kw) |        | Total Power    | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power |    |  |  |  |
|  |      | Total                                    | Integ†   | Kw‡         | Total         | Integ† | Kw‡            | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         |    |  |  |  |
| 690A018-A Outdoor Section With 517EN024 Indoor Section                 |      |  |          |             |               |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 65   | 600  | 5.87                                     | 5.40     | 1.36        | 7.94          | 7.30   | 1.47           | 10.1          | 9.25   | 1.59        | 12.6          | 11.2   | 1.70        | 15.4          | 14.0   | 1.82        | 18.5          | 18.5   | 1.95        | 22.5          | 22.5   | 2.13        | 26.5          | 26.5   | 2.33        |    |  |  |  |
|  | 675  | 6.02                                     | 5.54     | 1.40        | 8.11          | 7.45   | 1.50           | 10.3          | 9.43   | 1.61        | 12.8          | 11.4   | 1.72        | 15.7          | 14.3   | 1.83        | 18.8          | 18.8   | 1.96        | 22.9          | 22.9   | 2.13        | 26.9          | 26.9   | 2.33        |    |  |  |  |
|  | 750  | 6.15                                     | 5.66     | 1.43        | 8.25          | 7.58   | 1.53           | 10.5          | 9.60   | 1.64        | 13.0          | 11.6   | 1.74        | 15.9          | 14.5   | 1.85        | 19.1          | 19.1   | 1.98        | 23.2          | 23.2   | 2.15        | 27.2          | 27.2   | 2.35        |    |  |  |  |
| 70   | 600  | 5.50                                     | 5.06     | 1.37        | 7.62          | 7.00   | 1.48           | 9.81          | 8.94   | 1.60        | 12.2          | 10.9   | 1.72        | 15.0          | 13.7   | 1.85        | 18.1          | 18.1   | 1.98        | 22.0          | 22.0   | 2.16        | 26.0          | 26.0   | 2.36        |    |  |  |  |
|  | 675  | 5.65                                     | 5.20     | 1.40        | 7.78          | 7.15   | 1.51           | 10.0          | 9.12   | 1.63        | 12.5          | 11.1   | 1.74        | 15.3          | 13.9   | 1.86        | 18.4          | 18.4   | 1.99        | 22.4          | 22.4   | 2.17        | 26.4          | 26.4   | 2.37        |    |  |  |  |
|  | 750  | 5.78                                     | 5.32     | 1.43        | 7.92          | 7.28   | 1.54           | 10.2          | 9.28   | 1.65        | 12.7          | 11.2   | 1.77        | 15.5          | 14.1   | 1.88        | 18.7          | 18.7   | 2.01        | 22.7          | 22.7   | 2.18        | 26.7          | 26.7   | 2.38        |    |  |  |  |
| 75   | 600  | 5.12                                     | 4.71     | 1.37        | 7.26          | 6.67   | 1.49           | 9.47          | 8.64   | 1.61        | 11.9          | 10.6   | 1.74        | 14.6          | 13.3   | 1.88        | 17.6          | 17.6   | 2.02        | 21.4          | 21.4   | 2.20        | 25.4          | 25.4   | 2.39        |    |  |  |  |
|  | 675  | 5.26                                     | 4.84     | 1.40        | 7.43          | 6.83   | 1.52           | 9.66          | 8.81   | 1.64        | 12.1          | 10.7   | 1.76        | 14.9          | 13.5   | 1.89        | 18.0          | 18.0   | 2.03        | 21.8          | 21.8   | 2.21        | 25.8          | 25.8   | 2.40        |    |  |  |  |
|  | 750  | 5.40                                     | 4.96     | 1.43        | 7.58          | 6.96   | 1.55           | 9.83          | 8.96   | 1.67        | 12.3          | 10.9   | 1.79        | 15.1          | 13.8   | 1.91        | 18.2          | 18.2   | 2.04        | 22.2          | 22.2   | 2.22        | 26.2          | 26.2   | 2.41        |    |  |  |  |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |          |             |               |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| Indoor Section   |      | Size                                     | Heating  |             |               |        | Indoor Section |               | Size   | Heating     |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  | Capacity |             | Power         |        |                |               |        | Capacity    |               | Power  |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS/509AS  |      | 018                                      | 0.96     |             | 1.02          |        | 517EN          |               | 018    | 0.98        |               | 1.02   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 019                                      | 0.98     |             | 1.00          |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 024                                      | 0.98     |             | 1.00          |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519E   |      | 018                                      | 0.96     |             | 1.02          |        | 513C           |               | 018    | 0.97        |               | 1.04   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 024                                      | 0.98     |             | 1.00          |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 508A   |      | 024                                      | 0.99     |             | 1.00          |        | 516A           |               | 018    | 0.97        |               | 0.97   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 510B   |      | 024                                      | 0.99     |             | 0.99          |        |                |               | 024    | 0.99        |               | 0.99   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | —  | —        |             | —             |        | 617ANA/ANU     |               | 018    | 0.98        |               | 0.96   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |          |             |               | 024    |                |               | 0.99   |             | 0.95          |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 690A018-B Outdoor Section With 617A018 Indoor Section                  |      |  |          |             |               |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 65   | 600  | 7.35                                     | 6.76     | 1.48        | 9.26          | 8.51   | 1.56           | 11.4          | 10.3   | 1.63        | 13.6          | 12.1   | 1.70        | 16.1          | 14.6   | 1.78        | 18.7          | 18.7   | 1.86        | 21.9          | 21.9   | 1.99        | 25.9          | 25.9   | 2.09        |    |  |  |  |
|  | 675  | 7.50                                     | 6.90     | 1.51        | 9.42          | 8.66   | 1.58           | 11.5          | 10.5   | 1.65        | 13.8          | 12.3   | 1.72        | 16.3          | 14.8   | 1.80        | 18.9          | 18.9   | 1.88        | 22.1          | 22.1   | 2.01        | 26.1          | 26.1   | 2.11        |    |  |  |  |
|  | 750  | 7.63                                     | 7.02     | 1.54        | 9.57          | 8.80   | 1.61           | 11.7          | 10.7   | 1.68        | 14.0          | 12.4   | 1.74        | 16.5          | 15.0   | 1.82        | 19.1          | 19.1   | 1.90        | 22.3          | 22.3   | 2.03        | 26.3          | 26.3   | 2.13        |    |  |  |  |
| 70   | 600  | 7.06                                     | 6.49     | 1.49        | 8.94          | 8.22   | 1.57           | 11.0          | 10.0   | 1.65        | 13.2          | 11.7   | 1.72        | 15.7          | 14.3   | 1.81        | 18.3          | 18.3   | 1.89        | 21.4          | 21.4   | 2.02        | 25.4          | 25.4   | 2.10        |    |  |  |  |
|  | 675  | 7.20                                     | 6.63     | 1.52        | 9.11          | 8.37   | 1.60           | 11.2          | 10.2   | 1.67        | 13.6          | 12.0   | 1.75        | 15.9          | 14.5   | 1.82        | 18.5          | 18.5   | 1.91        | 21.7          | 21.7   | 2.04        | 25.7          | 25.7   | 2.12        |    |  |  |  |
|  | 750  | 7.34                                     | 6.75     | 1.55        | 9.26          | 8.51   | 1.63           | 11.4          | 10.4   | 1.70        | 13.6          | 12.1   | 1.77        | 16.1          | 14.6   | 1.84        | 18.7          | 18.7   | 1.93        | 21.9          | 21.9   | 2.05        | 25.9          | 25.9   | 2.14        |    |  |  |  |
| 75   | 600  | 6.76                                     | 6.22     | 1.49        | 8.63          | 7.93   | 1.58           | 10.7          | 9.73   | 1.67        | 12.9          | 11.4   | 1.75        | 15.3          | 13.9   | 1.83        | 17.9          | 17.9   | 1.92        | 21.0          | 21.0   | 2.05        | 25.0          | 25.0   | 2.12        |    |  |  |  |
|  | 675  | 6.90                                     | 6.35     | 1.53        | 8.80          | 8.08   | 1.61           | 10.9          | 9.90   | 1.69        | 13.1          | 11.6   | 1.77        | 15.5          | 14.1   | 1.85        | 18.1          | 18.1   | 1.94        | 21.2          | 21.2   | 2.06        | 25.2          | 25.2   | 2.14        |    |  |  |  |
|  | 750  | 7.04                                     | 6.48     | 1.56        | 8.94          | 8.22   | 1.64           | 11.0          | 10.1   | 1.72        | 13.3          | 11.8   | 1.79        | 15.7          | 14.3   | 1.87        | 18.3          | 18.3   | 1.96        | 21.4          | 21.4   | 2.08        | 25.4          | 25.4   | 2.16        |    |  |  |  |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |          |             |               |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| Indoor Section   |      | Size                                     | Heating  |             |               |        | Indoor Section |               | Size   | Heating     |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  | Capacity |             | Power         |        |                |               |        | Capacity    |               | Power  |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS/509AS  |      | 018                                      | 0.98     |             | 1.04          |        | 517EN          |               | 018    | 1.01        |               | 1.04   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 019                                      | 1.00     |             | 1.01          |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 024                                      | 1.00     |             | 1.01          |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519E   |      | 018                                      | 0.98     |             | 1.04          |        | 513C           |               | 018    | 0.99        |               | 1.07   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 024                                      | 1.00     |             | 1.01          |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 508A   |      | 024                                      | 1.00     |             | 1.01          |        | 516A           |               | 018    | 0.99        |               | 0.99   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | —  | —        |             | —             |        |                |               | 024    | 1.01        |               | 1.01   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 617ANA/ANU                               |          | 018         | 1.00          |        |                |               | 1.00   |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 024  | 1.02 |  |          | 0.99        |               |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 690A024-A Outdoor Section With 517EN030 Indoor Section                 |      |  |          |             |               |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 65   | 800  | 9.41                                     | 8.66     | 1.74        | 11.8          | 10.8   | 1.88           | 14.4          | 13.1   | 2.03        | 17.4          | 15.4   | 2.18        | 20.6          | 18.8   | 2.33        | 24.7          | 24.7   | 2.54        | 29.9          | 29.9   | 2.80        | 33.9          | 33.9   | 3.00        |    |  |  |  |
|  | 900  | 9.59                                     | 8.82     | 1.77        | 12.0          | 11.0   | 1.91           | 14.6          | 13.3   | 2.05        | 17.6          | 15.7   | 2.20        | 21.0          | 19.1   | 2.35        | 25.2          | 25.2   | 2.55        | 30.4          | 30.4   | 2.81        | 34.1          | 34.1   | 3.02        |    |  |  |  |
|  | 1000 | 9.75                                     | 8.97     | 1.81        | 12.1          | 11.2   | 1.94           | 14.8          | 13.5   | 2.08        | 17.9          | 15.9   | 2.22        | 21.2          | 19.3   | 2.37        | 25.5          | 25.5   | 2.56        | 30.8          | 30.8   | 2.82        | 34.3          | 34.3   | 3.04        |    |  |  |  |
| 70   | 800  | 9.09                                     | 8.36     | 1.76        | 11.4          | 10.5   | 1.91           | 14.1          | 12.8   | 2.06        | 17.0          | 15.1   | 2.22        | 20.2          | 18.4   | 2.38        | 24.2          | 24.2   | 2.59        | 29.2          | 29.2   | 2.86        | 33.6          | 33.6   | 3.03        |    |  |  |  |
|  | 900  | 9.28                                     | 8.53     | 1.79        | 11.6          | 10.7   | 1.94           | 14.3          | 13.0   | 2.09        | 17.2          | 15.3   | 2.24        | 20.5          | 18.7   | 2.40        | 24.6          | 24.6   | 2.60        | 29.8          | 29.8   | 2.88        | 33.8          | 33.8   | 3.05        |    |  |  |  |
|  | 1000 | 9.44                                     | 8.68     | 1.83        | 11.8          | 10.9   | 1.97           | 14.5          | 13.2   | 2.12        | 17.5          | 15.5   | 2.26        | 20.8          | 18.9   | 2.42        | 25.0          | 25.0   | 2.61        | 30.2          | 30.2   | 2.87        | 34.0          | 34.0   | 3.06        |    |  |  |  |
| 75   | 800  | 8.73                                     | 8.03     | 1.77        | 11.1          | 10.2   | 1.93           | 13.7          | 12.5   | 2.09        | 16.5          | 14.7   | 2.26        | 19.8          | 18.0   | 2.43        | 23.6          | 23.6   | 2.64        | 28.6          | 28.6   | 2.91        | 32.6          | 32.6   | 3.07        |    |  |  |  |
|  | 900  | 8.91                                     | 8.20     | 1.81        | 11.3          | 10.4   | 1.96           | 13.9          | 12.7   | 2.12        | 16.8          | 14.9   | 2.28        | 20.1          | 18.3   | 2.45        | 24.0          | 24.0   | 2.65        | 29.1          | 29.1   | 2.91        | 33.1          | 33.1   | 3.09        |    |  |  |  |
|  | 1000 | 9.08                                     | 8.36     | 1.85        | 11.5          | 10.6   | 2.00           | 14.1          | 12.9   | 2.15        | 17.1          | 15.2   | 2.30        | 20.3          | 18.5   | 2.47        | 24.4          | 24.4   | 2.66        | 29.5          | 29.5   | 2.92        | 33.5          | 33.5   | 3.10        |    |  |  |  |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |          |             |               |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| Indoor Section   |      | Size                                     | Heating  |             |               |        | Indoor Section |               | Size   | Heating     |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  | Capacity |             | Power         |        |                |               |        | Capacity    |               | Power  |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS/509AS  |      | 024                                      | 0.99     |             | 1.01          |        | 517EN          |               | 024    | 0.99        |               | 1.01   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 025                                      | 0.98     |             | 1.00          |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 030B                                     | 1.00     |             | 0.99          |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 030WB                                    | 1.00     |             | 0.99          |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519E   |      | 024                                      | 0.99     |             | 1.01          |        | 513C           |               | 024    | 0.97        |               | 1.00   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 030                                      | 1.00     |             | 0.99          |        |                |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 508A   |      | 024                                      | 0.98     |             | 1.01          |        | 516A           |               | 024    | 0.99        |               | 1.00   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 506B   |      | 030                                      | 0.98     |             | 0.98          |        |                |               | 030    | 1.00        |               | 1.01   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 510B   |      | 036                                      | 0.99     |             | 0.99          |        | 617ANA/ANU     |               | 018*   | 0.95        |               | 1.01   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | —  | —        |             | —             |        |                |               | 024    | 0.98        |               | 0.93   |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |          |             |               |        |                |               |        |             |               |        | 030         | 0.98          |        | 0.93        |               |        |             |               |        |             |               |        |             |    |  |  |  |

# HEAT PUMP HEATING PERFORMANCE Continued

| INDOOR AIR   |      | OUTDOOR COIL ENTERING AIR TEMPERATURE °F |        |             |               |                |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|--|------|--|--------|-------------|---------------|----------------|-------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|----|--|--|--|
| E<br>D<br>B  | CFM  | -3                                       |        |             |               | 7              |             |               |        | 17          |               |        |             | 27            |        |             |               | 37     |             |               |        | 47          |               |        |             | 57 |  |  |  |
|  |      | Capacity (Kw)                            |        | Total Power | Capacity (Kw) |                | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power |    |  |  |  |
|  |      | Total                                    | Integ† | Kw‡         | Total         | Integ†         | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         |    |  |  |  |
| 690A030-A Outdoor Section With 517EN036 Indoor Section                 |      |  |        |             |               |                |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 65   | 1000 | 12.6                                     | 11.6   | 2.19        | 15.3          | 14.1           | 2.35        | 18.3          | 16.7   | 2.52        | 21.7          | 19.2   | 2.69        | 25.4          | 23.1   | 2.88        | 30.1          | 30.1   | 3.12        | 35.9          | 35.9   | 3.43        |               |        |             |    |  |  |  |
|  | 1125 | 12.8                                     | 11.8   | 2.23        | 15.6          | 14.3           | 2.39        | 18.6          | 16.9   | 2.55        | 22.0          | 19.5   | 2.72        | 25.8          | 23.4   | 2.90        | 30.6          | 30.6   | 3.13        | 36.5          | 36.5   | 3.42        |               |        |             |    |  |  |  |
|  | 1250 | 13.0                                     | 12.0   | 2.28        | 15.8          | 14.5           | 2.43        | 18.8          | 17.2   | 2.58        | 22.3          | 19.8   | 2.75        | 26.1          | 23.8   | 2.92        | 31.0          | 31.0   | 3.14        | 37.0          | 37.0   | 3.43        |               |        |             |    |  |  |  |
| 70   | 1000 | 12.2                                     | 11.2   | 2.22        | 15.0          | 13.8           | 2.40        | 17.9          | 16.3   | 2.57        | 21.3          | 18.9   | 2.76        | 24.9          | 22.7   | 2.95        | 29.5          | 29.5   | 3.20        | 35.2          | 35.2   | 3.52        |               |        |             |    |  |  |  |
|  | 1125 | 12.4                                     | 11.4   | 2.27        | 15.2          | 14.0           | 2.43        | 18.2          | 16.6   | 2.60        | 21.6          | 19.2   | 2.78        | 25.3          | 23.0   | 2.97        | 30.0          | 30.0   | 3.21        | 35.8          | 35.8   | 3.51        |               |        |             |    |  |  |  |
|  | 1250 | 12.6                                     | 11.6   | 2.31        | 15.5          | 14.2           | 2.48        | 18.5          | 16.8   | 2.64        | 21.9          | 19.4   | 2.81        | 25.6          | 23.3   | 2.99        | 30.4          | 30.4   | 3.22        | 36.3          | 36.3   | 3.52        |               |        |             |    |  |  |  |
| 75   | 1000 | 11.8                                     | 10.8   | 2.25        | 14.7          | 13.5           | 2.44        | 17.6          | 16.0   | 2.62        | 20.8          | 18.5   | 2.82        | 24.4          | 22.2   | 3.02        | 29.0          | 29.0   | 3.28        | 34.5          | 34.5   | 3.61        |               |        |             |    |  |  |  |
|  | 1125 | 12.0                                     | 11.1   | 2.30        | 14.9          | 13.7           | 2.48        | 17.8          | 16.3   | 2.66        | 21.2          | 18.8   | 2.84        | 24.8          | 22.6   | 3.04        | 29.4          | 29.4   | 3.29        | 35.1          | 35.1   | 3.60        |               |        |             |    |  |  |  |
|  | 1250 | 12.2                                     | 11.3   | 2.35        | 15.1          | 13.9           | 2.52        | 18.1          | 16.5   | 2.69        | 21.4          | 19.0   | 2.88        | 25.1          | 22.9   | 3.07        | 29.8          | 29.8   | 3.30        | 35.6          | 35.6   | 3.61        |               |        |             |    |  |  |  |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |        |             |               |                |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| Indoor Section   |      | Size                                     |        | Heating     |               | Indoor Section |             | Size          |        | Heating     |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |        | Capacity    | Power         |                |             |               |        | Capacity    | Power         |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519CS  |      | 036                                      |        | 1.01        |               | 506B           |             | 030           |        | 0.99        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS  |      | 036WB                                    |        | 1.01        |               | 510B           |             | 036           |        | 1.00        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS/509AS  |      | 030WB                                    |        | 0.99        |               | 517EN          |             | 030           |        | 1.00        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 030B                                     |        | 0.99        |               |                |             | 036           |        | 1.01        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 036B                                     |        | 1.01        |               |                |             | 031           |        | 1.01        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 030                                      |        | 0.99        |               |                |             | 036           |        | 1.00        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519E   |      | 036                                      |        | 1.01        |               | 513C           |             | 030           |        | 0.99        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 508A   |      | 036                                      |        | 0.99        |               | 516A           |             | 030           |        | 1.00        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | —  |        | —           |               | 617ANA/ANU     |             | 030           |        | 1.00        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |        |             |               |                |             | 036           |        | 1.03        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 690A030-B Outdoor Section With 617A030 Indoor Section                  |      |  |        |             |               |                |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 65   | 850  | 12.6                                     | 11.6   | 2.27        | 15.8          | 14.5           | 2.40        | 18.9          | 17.3   | 2.52        | 22.2          | 19.7   | 2.63        | 25.6          | 23.3   | 2.73        | 29.8          | 29.8   | 2.88        | 34.8          | 34.8   | 3.06        |               |        |             |    |  |  |  |
|  | 1075 | 13.2                                     | 12.1   | 2.36        | 16.4          | 15.0           | 2.48        | 19.5          | 17.8   | 2.58        | 22.8          | 20.3   | 2.68        | 26.4          | 24.0   | 2.77        | 30.7          | 30.7   | 2.89        | 35.9          | 35.9   | 3.05        |               |        |             |    |  |  |  |
|  | 1250 | 13.5                                     | 12.4   | 2.42        | 16.7          | 15.4           | 2.54        | 19.9          | 18.1   | 2.63        | 23.3          | 20.7   | 2.72        | 26.9          | 24.5   | 2.80        | 31.3          | 31.3   | 2.91        | 36.5          | 36.5   | 3.06        |               |        |             |    |  |  |  |
| 70   | 850  | 11.9                                     | 11.0   | 2.29        | 15.3          | 14.0           | 2.43        | 18.5          | 16.9   | 2.57        | 21.6          | 19.2   | 2.68        | 25.0          | 22.7   | 2.79        | 29.0          | 29.0   | 2.93        | 33.9          | 33.9   | 3.11        |               |        |             |    |  |  |  |
|  | 1075 | 12.5                                     | 11.5   | 2.37        | 15.8          | 14.5           | 2.51        | 19.0          | 17.3   | 2.63        | 22.3          | 19.8   | 2.73        | 25.8          | 23.4   | 2.82        | 30.0          | 30.0   | 2.95        | 35.0          | 35.0   | 3.10        |               |        |             |    |  |  |  |
|  | 1250 | 12.9                                     | 11.8   | 2.44        | 16.2          | 14.9           | 2.57        | 19.3          | 17.6   | 2.68        | 22.7          | 20.1   | 2.77        | 26.3          | 23.9   | 2.86        | 30.6          | 30.6   | 2.97        | 35.7          | 35.7   | 3.12        |               |        |             |    |  |  |  |
| 75   | 850  | 11.2                                     | 10.3   | 2.30        | 14.6          | 13.4           | 2.45        | 17.9          | 16.3   | 2.60        | 21.1          | 18.7   | 2.72        | 24.4          | 22.2   | 2.84        | 28.4          | 28.4   | 2.98        | 33.0          | 33.0   | 3.16        |               |        |             |    |  |  |  |
|  | 1075 | 11.8                                     | 10.8   | 2.39        | 15.2          | 14.0           | 2.53        | 18.5          | 16.9   | 2.67        | 21.7          | 19.3   | 2.77        | 25.1          | 22.8   | 2.87        | 29.4          | 29.4   | 3.01        | 34.3          | 34.3   | 3.17        |               |        |             |    |  |  |  |
|  | 1250 | 12.2                                     | 11.2   | 2.46        | 15.6          | 14.3           | 2.60        | 18.9          | 17.2   | 2.72        | 22.1          | 19.7   | 2.82        | 25.7          | 23.4   | 2.91        | 30.0          | 30.0   | 3.04        | 35.1          | 35.1   | 3.19        |               |        |             |    |  |  |  |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |        |             |               |                |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| Indoor Section   |      | Size                                     |        | Heating     |               | Indoor Section |             | Size          |        | Heating     |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |        | Capacity    | Power         |                |             |               |        | Capacity    | Power         |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519D   |      | 030B                                     |        | 1.00        |               | 510B           |             | 036           |        | 1.01        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519E   |      | 030                                      |        | 1.00        |               | 517EN          |             | 030           |        | 1.00        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 506B   |      | 036                                      |        | 1.01        |               |                |             | 036           |        | 1.01        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 030                                      |        | 0.96        |               |                |             | 031           |        | 1.02        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 036                                      |        | 1.01        |               |                |             | 513C          |        | 030         |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519C   |      | 036                                      |        | 1.01        |               | 516A           |             | 030           |        | 1.01        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS/509AS  |      | 036B                                     |        | 1.01        |               | 617ANA/ANU     |             | 030           |        | 1.00        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 508A   |      | 036                                      |        | 1.00        |               |                |             | 036           |        | 1.00        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 690A031-A Outdoor Section With 617A030 Indoor Section                  |      |  |        |             |               |                |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 65   | 1000 | 12.6                                     | 11.6   | 2.07        | 15.8          | 14.5           | 2.23        | 19.2          | 17.5   | 2.39        | 22.8          | 20.3   | 2.55        | 26.8          | 24.4   | 2.73        | 31.2          | 31.2   | 2.93        | 36.7          | 36.7   | 3.19        |               |        |             |    |  |  |  |
|  | 1125 | 12.9                                     | 11.9   | 2.11        | 16.1          | 14.8           | 2.27        | 19.5          | 17.8   | 2.42        | 23.1          | 20.5   | 2.58        | 27.1          | 24.7   | 2.75        | 31.6          | 31.6   | 2.94        | 37.3          | 37.3   | 3.20        |               |        |             |    |  |  |  |
|  | 1250 | 13.1                                     | 12.1   | 2.15        | 16.3          | 15.0           | 2.30        | 19.7          | 18.0   | 2.46        | 23.5          | 20.8   | 2.61        | 27.5          | 25.0   | 2.77        | 32.0          | 32.0   | 2.96        | 37.7          | 37.7   | 3.21        |               |        |             |    |  |  |  |
| 70   | 1000 | 12.1                                     | 11.1   | 2.09        | 15.3          | 14.1           | 2.26        | 18.7          | 17.1   | 2.43        | 22.3          | 19.8   | 2.60        | 26.2          | 23.9   | 2.79        | 30.5          | 30.5   | 2.99        | 36.0          | 36.0   | 3.26        |               |        |             |    |  |  |  |
|  | 1125 | 12.3                                     | 11.4   | 2.14        | 15.6          | 14.3           | 2.30        | 19.0          | 17.3   | 2.46        | 22.6          | 20.1   | 2.63        | 26.6          | 24.2   | 2.81        | 31.0          | 31.0   | 3.00        | 36.5          | 36.5   | 3.27        |               |        |             |    |  |  |  |
|  | 1250 | 12.6                                     | 11.6   | 2.18        | 15.8          | 14.6           | 2.34        | 19.3          | 17.6   | 2.50        | 22.9          | 20.4   | 2.66        | 26.9          | 24.5   | 2.83        | 31.4          | 31.4   | 3.02        | 37.0          | 37.0   | 3.28        |               |        |             |    |  |  |  |
| 75   | 1000 | 11.5                                     | 10.6   | 2.12        | 14.8          | 13.6           | 2.29        | 18.2          | 16.6   | 2.47        | 21.8          | 19.3   | 2.65        | 25.7          | 23.4   | 2.85        | 29.9          | 29.9   | 3.06        | 35.2          | 35.2   | 3.33        |               |        |             |    |  |  |  |
|  | 1125 | 11.8                                     | 10.8   | 2.16        | 15.1          | 13.9           | 2.33        | 18.5          | 16.9   | 2.51        | 22.1          | 19.6   | 2.68        | 26.0          | 23.7   | 2.87        | 30.4          | 30.4   | 3.07        | 35.8          | 35.8   | 3.34        |               |        |             |    |  |  |  |
|  | 1250 | 12.0                                     | 11.0   | 2.20        | 15.4          | 14.1           | 2.37        | 18.8          | 17.1   | 2.54        | 22.4          | 19.9   | 2.71        | 26.4          | 24.0   | 2.89        | 30.8          | 30.8   | 3.09        | 36.2          | 36.2   | 3.35        |               |        |             |    |  |  |  |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |        |             |               |                |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| Indoor Section   |      | Size                                     |        | Heating     |               | Indoor Section |             | Size          |        | Heating     |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |        | Capacity    | Power         |                |             |               |        | Capacity    | Power         |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS  |      | 030B                                     |        | 1.00        |               | 517EN          |             | 030           |        | 1.02        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS/509AS  |      | 036B                                     |        | 1.03        |               |                |             | 031           |        | 1.03        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519E   |      | 030                                      |        | 1.00        |               |                |             | 036           |        | 1.00        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 036                                      |        | 1.03        |               |                |             | 513C          |        | 030         |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 508A   |      | 035                                      |        | 1.00        |               | 516A           |             | 030           |        | 1.03        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 506B   |      | 030                                      |        | 1.00        |               | 617ANA/ANU     |             | 024*          |        | 0.95        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 036                                      |        | 1.03        |               |                |             | 030           |        | 1.03        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | —  |        | —           |               |                |             | 036           |        | 1.02        |               |        |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |

See notes on page 20.

# HEAT PUMP HEATING PERFORMANCE Continued

| INDOOR AIR   |      | OUTDOOR COIL ENTERING AIR TEMPERATURE °F |        |             |               |        |             |                |        |             |               |          |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|--|------|--|--------|-------------|---------------|--------|-------------|----------------|--------|-------------|---------------|----------|-------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|----|--|--|--|
|  |      | - 3                                      |        |             |               | 7      |             |                |        | 17          |               |          |             | 27            |        |             |               | 37     |             |               |        | 47          |               |        |             | 57 |  |  |  |
| E D B  | CFM  | Capacity (Kw)                            |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw)  |        | Total Power | Capacity (Kw) |          | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power |    |  |  |  |
|  |      | Total                                    | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total          | Integ† | Kw‡         | Total         | Integ†   | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         |    |  |  |  |
| 690A036-A Outdoor Section With 517EN042 Indoor Section                 |      |  |        |             |               |        |             |                |        |             |               |          |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 65   | 1200 | 16.4                                     | 15.1   | 2.76        | 19.9          | 18.2   | 2.97        | 23.7           | 21.6   | 3.20        | 27.9          | 24.8     | 3.44        | 32.5          | 29.6   | 3.70        | 38.1          | 38.1   | 4.01        | 45.2          | 45.2   | 4.43        |               |        |             |    |  |  |  |
|  | 1350 | 16.7                                     | 15.4   | 2.82        | 20.2          | 18.6   | 3.03        | 24.1           | 22.0   | 3.25        | 28.3          | 25.2     | 3.48        | 33.0          | 30.1   | 3.72        | 38.8          | 38.8   | 4.02        | 46.0          | 46.0   | 4.43        |               |        |             |    |  |  |  |
|  | 1500 | 17.0                                     | 15.6   | 2.88        | 20.5          | 18.8   | 3.08        | 24.4           | 22.3   | 3.30        | 28.7          | 25.5     | 3.52        | 33.5          | 30.5   | 3.75        | 39.3          | 39.3   | 4.05        | 46.6          | 46.6   | 4.45        |               |        |             |    |  |  |  |
| 70   | 1200 | 15.9                                     | 14.6   | 2.80        | 19.4          | 17.8   | 3.03        | 23.2           | 21.2   | 3.27        | 27.4          | 24.3     | 3.52        | 32.0          | 29.1   | 3.79        | 37.4          | 37.4   | 4.11        | 44.4          | 44.4   | 4.54        |               |        |             |    |  |  |  |
|  | 1350 | 16.2                                     | 14.9   | 2.86        | 19.8          | 18.2   | 3.08        | 23.6           | 21.5   | 3.32        | 27.8          | 24.7     | 3.56        | 32.5          | 29.5   | 3.82        | 38.0          | 38.0   | 4.12        | 45.1          | 45.1   | 4.54        |               |        |             |    |  |  |  |
|  | 1500 | 16.5                                     | 15.2   | 2.92        | 20.1          | 18.4   | 3.14        | 23.9           | 21.8   | 3.37        | 28.2          | 25.0     | 3.60        | 32.9          | 29.9   | 3.85        | 38.5          | 38.5   | 4.15        | 45.7          | 45.7   | 4.55        |               |        |             |    |  |  |  |
| 75   | 1200 | 15.4                                     | 14.1   | 2.84        | 19.0          | 17.4   | 3.08        | 22.7           | 20.7   | 3.33        | 26.8          | 23.8     | 3.60        | 31.4          | 28.6   | 3.89        | 36.6          | 36.6   | 4.21        | 43.5          | 43.5   | 4.64        |               |        |             |    |  |  |  |
|  | 1350 | 15.7                                     | 14.4   | 2.90        | 19.3          | 17.7   | 3.14        | 23.1           | 21.1   | 3.38        | 27.2          | 24.2     | 3.64        | 31.9          | 29.0   | 3.91        | 37.2          | 37.2   | 4.23        | 44.2          | 44.2   | 4.65        |               |        |             |    |  |  |  |
|  | 1500 | 16.0                                     | 14.7   | 2.96        | 19.6          | 18.0   | 3.19        | 23.4           | 21.4   | 3.43        | 27.6          | 24.5     | 3.68        | 32.3          | 29.4   | 3.95        | 37.8          | 37.8   | 4.25        | 44.9          | 44.9   | 4.66        |               |        |             |    |  |  |  |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |        |             |               |        |             |                |        |             |               |          |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| Indoor Section   |      | Size                                     |        | Heating     |               |        |             | Indoor Section |        | Size        |               | Heating  |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |        | Capacity    |               | Power  |             |                |        |             |               | Capacity |             | Power         |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519CS  |      | 036                                      |        | 0.96        |               | 0.99   |             | 519E           |        | 036         |               | 0.96     |             | 0.99          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 042                                      |        | 0.97        |               | 0.98   |             |                |        | 042         |               | 0.97     |             | 1.00          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS  |      | 036WB                                    |        | 0.96        |               | 0.99   |             | 508A           |        | 036         |               | 0.95     |             | 1.01          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS/509AS  |      | 036B                                     |        | 0.96        |               | 0.99   |             | 506B           |        | 036         |               | 0.97     |             | 0.99          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 042                                      |        | 0.97        |               | 1.00   |             |                |        | 042         |               | 0.97     |             | 1.00          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 042W                                     |        | 0.97        |               | 1.00   |             | 510B           |        | 036         |               | 0.97     |             | 1.00          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 043                                      |        | 0.97        |               | 0.95   |             | 517EN          |        | 036         |               | 0.97     |             | 1.02          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 043W                                     |        | 0.97        |               | 0.96   |             | 517E/GNS       |        | 042         |               | 1.00     |             | 1.00          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 042C                                     |        | 0.96        |               | 0.98   |             |                |        | 043         |               | 1.00     |             | 0.99          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | —  |        | —           |               | —      |             | 617ANA/ANU     |        | 036         |               | 0.97     |             | 1.01          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |        |             |               |        |             | 617ANA/ANU/ANM |        | 042         |               | 0.97     |             | 1.00          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 690A036-B Outdoor Section With 617A042 Indoor Section                  |      |  |        |             |               |        |             |                |        |             |               |          |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 65   | 1200 | 13.6                                     | 12.6   | 2.61        | 17.3          | 15.9   | 2.78        | 21.2           | 19.4   | 2.96        | 25.6          | 22.7     | 3.13        | 30.5          | 27.8   | 3.33        | 36.1          | 36.1   | 3.55        | 43.1          | 43.1   | 3.86        |               |        |             |    |  |  |  |
|  | 1350 | 13.9                                     | 12.8   | 2.66        | 17.6          | 16.2   | 2.83        | 21.6           | 19.7   | 3.00        | 26.0          | 23.1     | 3.17        | 31.0          | 28.2   | 3.36        | 36.7          | 36.7   | 3.58        | 43.8          | 43.8   | 3.88        |               |        |             |    |  |  |  |
|  | 1500 | 14.2                                     | 13.1   | 2.72        | 17.9          | 16.4   | 2.89        | 21.9           | 20.0   | 3.05        | 26.4          | 23.4     | 3.22        | 31.5          | 28.6   | 3.40        | 37.2          | 37.2   | 3.61        | 44.4          | 44.4   | 3.91        |               |        |             |    |  |  |  |
| 70   | 1200 | 13.0                                     | 11.9   | 2.63        | 16.7          | 15.4   | 2.81        | 20.6           | 18.8   | 3.00        | 24.9          | 22.1     | 3.19        | 29.8          | 27.1   | 3.39        | 35.2          | 35.2   | 3.61        | 42.0          | 42.0   | 3.92        |               |        |             |    |  |  |  |
|  | 1350 | 13.3                                     | 12.2   | 2.69        | 17.0          | 15.7   | 2.86        | 21.0           | 19.1   | 3.05        | 25.3          | 22.5     | 3.23        | 30.3          | 27.6   | 3.42        | 35.8          | 35.8   | 3.64        | 42.8          | 42.8   | 3.95        |               |        |             |    |  |  |  |
|  | 1500 | 13.6                                     | 12.5   | 2.75        | 17.3          | 15.9   | 2.92        | 21.3           | 19.4   | 3.10        | 25.7          | 22.8     | 3.27        | 30.7          | 28.0   | 3.46        | 36.3          | 36.3   | 3.67        | 43.4          | 43.4   | 3.97        |               |        |             |    |  |  |  |
| 75   | 1200 | 12.3                                     | 11.3   | 2.65        | 16.1          | 14.8   | 2.84        | 20.0           | 18.3   | 3.04        | 24.3          | 21.5     | 3.23        | 29.0          | 26.4   | 3.45        | 34.3          | 34.3   | 3.68        | 41.0          | 41.0   | 3.99        |               |        |             |    |  |  |  |
|  | 1350 | 12.6                                     | 11.6   | 2.71        | 16.4          | 15.1   | 2.89        | 20.4           | 18.6   | 3.09        | 24.7          | 21.9     | 3.28        | 29.5          | 26.9   | 3.48        | 34.9          | 34.9   | 3.70        | 41.7          | 41.7   | 4.01        |               |        |             |    |  |  |  |
|  | 1500 | 12.9                                     | 11.8   | 2.77        | 16.7          | 15.4   | 2.95        | 20.7           | 18.9   | 3.14        | 25.0          | 22.2     | 3.32        | 30.0          | 27.3   | 3.52        | 35.4          | 35.4   | 3.74        | 42.4          | 42.4   | 4.04        |               |        |             |    |  |  |  |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |        |             |               |        |             |                |        |             |               |          |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| Indoor Section   |      | Size                                     |        | Heating     |               |        |             | Indoor Section |        | Size        |               | Heating  |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |        | Capacity    |               | Power  |             |                |        |             |               | Capacity |             | Power         |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519CS  |      | 036                                      |        | 0.98        |               | 0.97   |             | 508A           |        | 036         |               | 0.95     |             | 0.98          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 042                                      |        | 1.01        |               | 0.98   |             |                |        | 506B        |               | 036      |             | 0.99          |        | 0.98        |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS/509AS  |      | 036B                                     |        | 0.98        |               | 0.97   |             | 510B           |        | 036         |               | 0.99     |             | 0.99          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 042                                      |        | 0.99        |               | 0.98   |             |                |        | 517EN       |               | 036      |             | 1.00          |        | 1.01        |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 142                                      |        | 0.99        |               | 0.98   |             | 517E/GNS       |        | 042         |               | 1.02     |             | 0.99          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 043                                      |        | 1.03        |               | 0.98   |             |                |        | 043         |               | 1.02     |             | 0.98          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 143                                      |        | 1.00        |               | 0.95   |             |                |        | 043         |               | 1.02     |             | 0.98          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 242                                      |        | 0.99        |               | 0.97   |             |                |        | 617ANA/ANU  |               | 030*     |             | 0.96          |        | 0.99        |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519E   |      | 036                                      |        | 0.98        |               | 0.97   |             | 617ANA/ANU/ANM |        | 036         |               | 0.98     |             | 0.98          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 042                                      |        | 0.99        |               | 0.98   |             |                |        | 042         |               | 1.00     |             | 1.00          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 690A042-A Outdoor Section With 517E/GNS042 Indoor Section              |      |  |        |             |               |        |             |                |        |             |               |          |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 65   | 1400 | 18.1                                     | 16.6   | 3.07        | 22.0          | 20.2   | 3.32        | 26.3           | 24.0   | 3.58        | 31.2          | 27.7     | 3.85        | 36.6          | 33.3   | 4.14        | 43.2          | 43.2   | 4.51        | 51.5          | 51.5   | 5.01        |               |        |             |    |  |  |  |
|  | 1575 | 18.4                                     | 16.9   | 3.14        | 22.3          | 20.5   | 3.38        | 26.8           | 24.4   | 3.63        | 31.7          | 28.1     | 3.89        | 37.1          | 33.8   | 4.17        | 43.9          | 43.9   | 4.53        | 52.4          | 52.4   | 5.02        |               |        |             |    |  |  |  |
|  | 1750 | 18.7                                     | 17.2   | 3.20        | 22.7          | 20.8   | 3.44        | 27.1           | 24.7   | 3.68        | 32.1          | 28.5     | 3.94        | 37.6          | 34.2   | 4.21        | 44.4          | 44.4   | 4.57        | 53.0          | 53.0   | 5.05        |               |        |             |    |  |  |  |
| 70   | 1400 | 17.6                                     | 16.2   | 3.12        | 21.5          | 19.7   | 3.38        | 25.8           | 23.5   | 3.65        | 30.5          | 27.1     | 3.94        | 35.9          | 32.6   | 4.25        | 42.3          | 42.3   | 4.62        | 50.5          | 50.5   | 5.12        |               |        |             |    |  |  |  |
|  | 1575 | 17.9                                     | 16.5   | 3.18        | 21.8          | 20.1   | 3.44        | 26.2           | 23.9   | 3.70        | 31.0          | 27.6     | 3.98        | 36.4          | 33.1   | 4.28        | 43.0          | 43.0   | 4.64        | 51.3          | 51.3   | 5.13        |               |        |             |    |  |  |  |
|  | 1750 | 18.3                                     | 16.8   | 3.25        | 22.2          | 20.4   | 3.50        | 26.6           | 24.2   | 3.76        | 31.5          | 27.9     | 4.03        | 36.9          | 33.6   | 4.32        | 43.6          | 43.6   | 4.67        | 52.0          | 52.0   | 5.16        |               |        |             |    |  |  |  |
| 75   | 1400 | 17.1                                     | 15.7   | 3.16        | 21.0          | 19.3   | 3.43        | 25.3           | 23.0   | 3.72        | 29.9          | 26.6     | 4.02        | 35.2          | 32.1   | 4.35        | 41.5          | 41.5   | 4.73        | 49.5          | 49.5   | 5.24        |               |        |             |    |  |  |  |
|  | 1575 | 17.4                                     | 16.0   | 3.23        | 21.4          | 19.6   | 3.50        | 25.7           | 23.4   | 3.78        | 30.4          | 27.0     | 4.07        | 35.8          | 32.5   | 4.38        | 42.1          | 42.1   | 4.75        | 50.3          | 50.3   | 5.25        |               |        |             |    |  |  |  |
|  | 1750 | 17.7                                     | 16.3   | 3.30        | 21.7          | 19.9   | 3.56        | 26.0           | 23.7   | 3.83        | 30.8          | 27.4     | 4.12        | 36.2          | 33.0   | 4.42        | 42.7          | 42.7   | 4.78        | 51.0          | 51.0   | 5.28        |               |        |             |    |  |  |  |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |        |             |               |        |             |                |        |             |               |          |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| Indoor Section   |      | Size                                     |        | Heating     |               |        |             | Indoor Section |        | Size        |               | Heating  |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |        | Capacity    |               | Power  |             |                |        |             |               | Capacity |             | Power         |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519CS  |      | 042                                      |        | 0.97        |               | 0.99   |             | 519E           |        | 042         |               | 0.97     |             | 1.00          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 048                                      |        | 0.98        |               | 1.01   |             |                |        | 048         |               | 0.99     |             | 0.99          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS  |      | 048                                      |        | 0.99        |               | 0.99   |             | 508A           |        | 048         |               | 0.97     |             | 0.99          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 049                                      |        | 0.99        |               | 0.98   |             |                |        | 506B        |               | 042      |             | 0.95          |        | 1.04        |               |        |             |               |        |             |               |        |             |    |  |  |  |
| 519DS/509AS  |      | 048C                                     |        | 0.98        |               | 0.99   |             | 510B           |        | 049         |               | 0.98     |             | 0.98          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 042                                      |        | 0.97        |               | 1.00   |             |                |        | 048         |               | 0.99     |             | 0.96          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 042W                                     |        | 0.97        |               | 1.01   |             | 517E/GNS       |        | 042         |               | 1.00     |             | 1.00          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 03                                       |        | 0.98        |               | 0.98   |             |                |        | 043         |               | 1.00     |             | 1.01          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 043W                                     |        | 0.98        |               | 0.98   |             |                |        | 048         |               | 1.00     |             | 0.98          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 042C                                     |        | 0.95        |               | 0.99   |             |                |        | 049         |               | 1.00     |             | 0.99          |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      | 048W                                     |        | 0.99        |               | 0.99   |             |                |        | —           |               | —        |             | —             |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |
|  |      |  |        |             |               |        |             |                |        |             |               |          |             |               |        |             |               |        |             |               |        |             |               |        |             |    |  |  |  |

# HEAT PUMP HEATING PERFORMANCE Continued

| INDOOR AIR   |      | OUTDOOR COIL ENTERING AIR TEMPERATURE °F |        |                  |               |        |                 |                |        |                 |               |                  |                 |               |        |                 |               |        |                 |               |        |                 |
|--|------|--|--------|------------------|---------------|--------|-----------------|----------------|--------|-----------------|---------------|------------------|-----------------|---------------|--------|-----------------|---------------|--------|-----------------|---------------|--------|-----------------|
|  |      | - 3                                      |        |                  | 7             |        |                 | 17             |        |                 | 27            |                  |                 | 37            |        |                 | 47            |        |                 | 57            |        |                 |
|  |      | Capacity (Kw)                            |        | Total Power Kw†  | Capacity (Kw) |        | Total Power Kw† | Capacity (Kw)  |        | Total Power Kw† | Capacity (Kw) |                  | Total Power Kw† | Capacity (Kw) |        | Total Power Kw† | Capacity (Kw) |        | Total Power Kw† | Capacity (Kw) |        | Total Power Kw† |
| E D B  | CFM  | Total                                    | Integ† | Kw†              | Total         | Integ† | Kw†             | Total          | Integ† | Kw†             | Total         | Integ†           | Kw†             | Total         | Integ† | Kw†             | Total         | Integ† | Kw†             | Total         | Integ† | Kw†             |
| 690A042-B Outdoor Section With 517E/GNS042 Indoor Section              |      |  |        |                  |               |        |                 |                |        |                 |               |                  |                 |               |        |                 |               |        |                 |               |        |                 |
| 65   | 1400 | 17.9                                     | 16.4   | 3.06             | 21.9          | 20.1   | 3.31            | 26.4           | 24.1   | 3.58            | 31.3          | 27.8             | 3.86            | 36.7          | 33.4   | 4.15            | 43.2          | 43.2   | 4.51            | 51.4          | 51.4   | 5.00            |
|  | 1575 | 18.2                                     | 16.8   | 3.13             | 22.3          | 20.5   | 3.38            | 26.9           | 24.5   | 3.64            | 31.8          | 28.3             | 3.90            | 37.3          | 33.9   | 4.19            | 43.9          | 43.9   | 4.54            | 52.3          | 52.3   | 5.02            |
|  | 1750 | 18.6                                     | 17.1   | 3.20             | 22.7          | 20.8   | 3.45            | 27.3           | 24.9   | 3.70            | 32.3          | 28.7             | 3.96            | 37.8          | 34.4   | 4.23            | 44.6          | 44.6   | 4.58            | 52.9          | 52.9   | 5.05            |
| 70   | 1400 | 17.2                                     | 15.8   | 3.08             | 21.3          | 19.6   | 3.36            | 25.8           | 23.5   | 3.64            | 30.6          | 27.1             | 3.93            | 35.9          | 32.7   | 4.24            | 42.3          | 42.3   | 4.61            | 50.3          | 50.3   | 5.10            |
|  | 1575 | 17.6                                     | 16.2   | 3.16             | 21.7          | 19.9   | 3.43            | 26.2           | 23.9   | 3.70            | 31.1          | 27.6             | 3.98            | 36.5          | 33.2   | 4.28            | 43.0          | 43.0   | 4.64            | 51.2          | 51.2   | 5.12            |
|  | 1750 | 17.9                                     | 16.5   | 3.23             | 22.1          | 20.3   | 3.50            | 26.6           | 24.3   | 3.77            | 31.6          | 28.0             | 4.04            | 37.0          | 33.7   | 4.32            | 43.6          | 43.6   | 4.68            | 51.8          | 51.8   | 5.16            |
| 75   | 1400 | 16.4                                     | 15.1   | 3.11             | 20.7          | 19.0   | 3.40            | 25.1           | 22.9   | 3.70            | 29.8          | 26.5             | 4.01            | 35.2          | 32.0   | 4.34            | 41.3          | 41.3   | 4.71            | 49.2          | 49.2   | 5.21            |
|  | 1575 | 16.8                                     | 15.5   | 3.18             | 21.1          | 19.4   | 3.47            | 25.5           | 23.3   | 3.76            | 30.4          | 27.0             | 4.06            | 35.7          | 32.5   | 4.37            | 42.0          | 42.0   | 4.74            | 50.1          | 50.1   | 5.23            |
|  | 1750 | 17.2                                     | 15.8   | 3.26             | 21.5          | 19.7   | 3.54            | 25.9           | 23.7   | 3.83            | 30.8          | 27.4             | 4.11            | 36.2          | 33.0   | 4.42            | 42.6          | 42.6   | 4.78            | 50.7          | 50.7   | 5.26            |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |        |                  |               |        |                 |                |        |                 |               |                  |                 |               |        |                 |               |        |                 |               |        |                 |
| Indoor Section   |      | Size                                     |        | Heating Capacity |               | Power  |                 | Indoor Section |        | Size            |               | Heating Capacity |                 | Power         |        |                 |               |        |                 |               |        |                 |
| 519CS  |      | 042                                      |        | 0.97             |               | 0.99   |                 | 519E           |        | 042             |               | 0.97             |                 | 1.00          |        |                 |               |        |                 |               |        |                 |
|  |      | 048                                      |        | 0.98             |               | 1.01   |                 |                |        | 048             |               | 0.99             |                 | 0.99          |        |                 |               |        |                 |               |        |                 |
| 519DS  |      | 048                                      |        | 0.99             |               | 0.99   |                 | 508A           |        | 048             |               | 0.97             |                 | 0.99          |        |                 |               |        |                 |               |        |                 |
|  |      | 049                                      |        | 0.99             |               | 0.98   |                 |                |        | 042             |               | 0.95             |                 | 1.04          |        |                 |               |        |                 |               |        |                 |
|  |      | 248                                      |        | 0.98             |               | 0.99   |                 | 506B           |        | 049             |               | 0.98             |                 | 0.98          |        |                 |               |        |                 |               |        |                 |
| 519DS/509AS  |      | 042                                      |        | 0.97             |               | 1.00   |                 |                |        | 048             |               | 0.99             |                 | 0.96          |        |                 |               |        |                 |               |        |                 |
|  |      | 142                                      |        | 0.97             |               | 1.01   |                 | 510B           |        | 042             |               | 1.00             |                 | 1.00          |        |                 |               |        |                 |               |        |                 |
|  |      | 043                                      |        | 0.98             |               | 0.98   |                 |                |        | 043             |               | 1.00             |                 | 1.01          |        |                 |               |        |                 |               |        |                 |
|  |      | 143                                      |        | 0.98             |               | 0.98   |                 |                |        | 048             |               | 1.00             |                 | 0.98          |        |                 |               |        |                 |               |        |                 |
|  |      | 242                                      |        | 0.95             |               | 0.99   |                 |                |        | 049             |               | 1.00             |                 | 0.99          |        |                 |               |        |                 |               |        |                 |
|  |      | 148                                      |        | 0.99             |               | 0.99   |                 | 617ANA/ANU     |        | 036*            |               | 0.98             |                 | 1.00          |        |                 |               |        |                 |               |        |                 |
|  |      | —  |        | —                |               | —      |                 |                |        | 042             |               | 1.00             |                 | 1.02          |        |                 |               |        |                 |               |        |                 |
|  |      | —  |        | —                |               | —      |                 |                |        | 048             |               | 1.02             |                 | 0.99          |        |                 |               |        |                 |               |        |                 |
| 690A048-B Outdoor Section With 517E/GNS048 Indoor Section              |      |  |        |                  |               |        |                 |                |        |                 |               |                  |                 |               |        |                 |               |        |                 |               |        |                 |
| 65   | 1600 | 21.8                                     | 20.0   | 3.57             | 26.5          | 24.4   | 3.85            | 31.6           | 28.8   | 4.13            | 37.1          | 33.0             | 4.42            | 43.4          | 39.5   | 4.74            | 51.2          | 51.2   | 5.13            | 60.5          | 60.5   | 5.63            |
|  | 1800 | 22.2                                     | 20.5   | 3.66             | 27.0          | 24.8   | 3.93            | 32.2           | 29.4   | 4.20            | 37.7          | 33.5             | 4.47            | 44.2          | 40.2   | 4.78            | 52.1          | 52.1   | 5.16            | 61.6          | 61.6   | 5.65            |
|  | 2000 | 22.7                                     | 20.9   | 3.74             | 27.5          | 25.3   | 4.01            | 32.7           | 29.8   | 4.27            | 38.3          | 34.0             | 4.53            | 44.9          | 40.8   | 4.83            | 52.9          | 52.9   | 5.20            | 62.5          | 62.5   | 5.67            |
| 70   | 1600 | 20.9                                     | 19.2   | 3.59             | 25.8          | 23.7   | 3.89            | 30.8           | 28.1   | 4.19            | 36.3          | 32.2             | 4.49            | 42.5          | 38.6   | 4.82            | 50.1          | 50.1   | 5.23            | 60.6          | 60.6   | 5.75            |
|  | 1800 | 21.4                                     | 19.7   | 3.68             | 26.3          | 24.2   | 3.97            | 31.4           | 28.6   | 4.26            | 36.9          | 32.8             | 4.55            | 43.2          | 39.3   | 4.87            | 51.0          | 51.0   | 5.26            | 60.3          | 60.3   | 5.75            |
|  | 2000 | 21.8                                     | 20.1   | 3.77             | 26.7          | 24.6   | 4.05            | 31.9           | 29.1   | 4.33            | 37.5          | 33.3             | 4.61            | 43.9          | 39.9   | 4.92            | 51.8          | 51.8   | 5.30            | 61.2          | 61.2   | 5.78            |
| 75   | 1600 | 19.9                                     | 18.3   | 3.61             | 25.0          | 23.0   | 3.92            | 30.0           | 27.4   | 4.24            | 35.4          | 31.5             | 4.56            | 41.5          | 37.7   | 4.90            | 48.9          | 48.9   | 5.33            | 57.8          | 57.8   | 5.84            |
|  | 1800 | 20.4                                     | 18.8   | 3.70             | 25.5          | 23.4   | 4.00            | 30.6           | 27.9   | 4.31            | 36.0          | 32.0             | 4.62            | 42.2          | 38.4   | 4.95            | 49.8          | 49.8   | 5.36            | 59.0          | 59.0   | 5.86            |
|  | 2000 | 20.9                                     | 19.2   | 3.79             | 26.0          | 23.9   | 4.09            | 31.1           | 28.3   | 4.39            | 36.6          | 32.5             | 4.69            | 42.9          | 39.0   | 5.01            | 50.6          | 50.6   | 5.40            | 59.9          | 59.9   | 5.89            |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |        |                  |               |        |                 |                |        |                 |               |                  |                 |               |        |                 |               |        |                 |               |        |                 |
| Indoor Section   |      | Size                                     |        | Heating Capacity |               | Power  |                 | Indoor Section |        | Size            |               | Heating Capacity |                 | Power         |        |                 |               |        |                 |               |        |                 |
| 519CS  |      | 048                                      |        | 0.96             |               | 1.01   |                 | 508A           |        | 048             |               | 0.96             |                 | 1.01          |        |                 |               |        |                 |               |        |                 |
|  |      | 060                                      |        | 0.96             |               | 1.01   |                 |                |        | 049             |               | 0.96             |                 | 0.97          |        |                 |               |        |                 |               |        |                 |
| 519DS  |      | 048                                      |        | 0.99             |               | 1.00   |                 | 506B           |        | 061             |               | 0.99             |                 | 0.97          |        |                 |               |        |                 |               |        |                 |
|  |      | 049                                      |        | 0.99             |               | 0.99   |                 |                |        | 048             |               | 1.00             |                 | 0.98          |        |                 |               |        |                 |               |        |                 |
|  |      | 048C                                     |        | 0.96             |               | 1.00   |                 | 510B           |        | 060             |               | 1.01             |                 | 0.99          |        |                 |               |        |                 |               |        |                 |
| 519DS/509AS  |      | 048W                                     |        | 0.99             |               | 1.00   |                 |                |        | 048             |               | 1.00             |                 | 1.00          |        |                 |               |        |                 |               |        |                 |
|  |      | 057C                                     |        | 0.99             |               | 0.99   |                 | 517E/GNS       |        | 049             |               | 1.01             |                 | 1.02          |        |                 |               |        |                 |               |        |                 |
|  |      | 060                                      |        | 1.00             |               | 0.98   |                 |                |        | 060             |               | 1.01             |                 | 1.01          |        |                 |               |        |                 |               |        |                 |
|  |      | 061                                      |        | 0.99             |               | 0.97   |                 |                |        | 062             |               | 1.02             |                 | 1.00          |        |                 |               |        |                 |               |        |                 |
|  |      | 048                                      |        | 0.99             |               | 1.00   |                 |                |        | 063             |               | 1.02             |                 | 1.01          |        |                 |               |        |                 |               |        |                 |
|  |      | 060                                      |        | 0.99             |               | 0.99   |                 | 617ANA/ANU/ANM |        | 048             |               | 0.96             |                 | 0.95          |        |                 |               |        |                 |               |        |                 |
|  |      | —  |        | —                |               | —      |                 |                |        | 060             |               | 1.00             |                 | 0.99          |        |                 |               |        |                 |               |        |                 |
|  |      | —  |        | —                |               | —      |                 |                |        | —               |               | —                |                 | —             |        |                 |               |        |                 |               |        |                 |
| 690A048-D Outdoor Section With 517E/GNS049 Indoor Section              |      |  |        |                  |               |        |                 |                |        |                 |               |                  |                 |               |        |                 |               |        |                 |               |        |                 |
| 65   | 1600 | 21.6                                     | 19.9   | 3.45             | 26.8          | 24.7   | 3.69            | 32.3           | 29.4   | 3.92            | 38.0          | 33.8             | 4.15            | 44.3          | 40.3   | 4.39            | 51.8          | 51.8   | 4.69            | 60.7          | 60.7   | 5.08            |
|  | 1700 | 21.9                                     | 20.1   | 3.50             | 27.1          | 24.9   | 3.73            | 32.6           | 29.7   | 3.96            | 38.4          | 34.1             | 4.18            | 44.7          | 40.6   | 4.41            | 52.3          | 52.3   | 4.71            | 61.2          | 61.2   | 5.09            |
|  | 1800 | 22.1                                     | 20.4   | 3.54             | 27.4          | 25.2   | 3.78            | 32.9           | 30.0   | 4.00            | 38.7          | 34.4             | 4.21            | 45.0          | 41.0   | 4.44            | 52.7          | 52.7   | 4.74            | 61.7          | 61.7   | 5.12            |
|  |      |  |        |                  |               |        |                 |                |        |                 |               |                  |                 |               |        |                 |               |        |                 |               |        |                 |

## HEAT PUMP HEATING PERFORMANCE Continued

| INDOOR AIR   |      | OUTDOOR COIL ENTERING AIR TEMPERATURE °F |        |                  |               |        |             |                   |        |             |               |                  |             |               |        |             |               |        |             |               |        |             |
|--|------|--|--------|------------------|---------------|--------|-------------|-------------------|--------|-------------|---------------|------------------|-------------|---------------|--------|-------------|---------------|--------|-------------|---------------|--------|-------------|
|  |      | - 3                                      |        |                  | 7             |        |             | 17                |        |             | 27            |                  |             | 37            |        |             | 47            |        |             | 57            |        |             |
| E<br>D<br>B  | CFM  | Capacity (Kw)                            |        | Total Power      | Capacity (Kw) |        | Total Power | Capacity (Kw)     |        | Total Power | Capacity (Kw) |                  | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power | Capacity (Kw) |        | Total Power |
|  |      | Total                                    | Integ† | Kw‡              | Total         | Integ† | Kw‡         | Total             | Integ† | Kw‡         | Total         | Integ†           | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         | Total         | Integ† | Kw‡         |
| 690A060-A Outdoor Section With 517E/GNS062 Indoor Section              |      |  |        |                  |               |        |             |                   |        |             |               |                  |             |               |        |             |               |        |             |               |        |             |
| 65   | 1800 | 27.5                                     | 25.3   | 4.10             | 32.9          | 30.3   | 4.42        | 38.6              | 35.2   | 4.74        | 44.5          | 39.5             | 5.06        | 51.6          | 47.0   | 5.44        | 60.1          | 60.1   | 5.90        | 70.2          | 70.2   | 6.47        |
|  | 2000 | 28.0                                     | 25.7   | 4.19             | 33.5          | 30.8   | 4.50        | 39.2              | 35.8   | 4.82        | 45.2          | 40.1             | 5.13        | 52.4          | 47.7   | 5.49        | 61.0          | 61.0   | 5.93        | 71.3          | 71.3   | 6.48        |
|  | 2200 | 28.5                                     | 26.2   | 4.29             | 34.0          | 31.2   | 4.59        | 39.8              | 36.3   | 4.90        | 45.7          | 40.6             | 5.19        | 53.1          | 48.3   | 5.55        | 61.8          | 61.8   | 5.97        | 72.1          | 72.1   | 6.52        |
| 70   | 1800 | 26.4                                     | 24.3   | 4.13             | 32.1          | 29.5   | 4.47        | 37.8              | 34.4   | 4.81        | 43.6          | 38.7             | 5.15        | 50.5          | 46.0   | 5.55        | 58.9          | 58.9   | 6.02        | 68.8          | 68.8   | 6.60        |
|  | 2000 | 27.0                                     | 24.8   | 4.23             | 32.7          | 30.0   | 4.56        | 38.4              | 35.0   | 4.89        | 44.2          | 39.3             | 5.22        | 51.3          | 46.7   | 5.60        | 59.8          | 59.8   | 6.05        | 69.9          | 69.9   | 6.62        |
|  | 2200 | 27.5                                     | 25.3   | 4.32             | 33.1          | 30.5   | 4.65        | 38.9              | 35.5   | 4.97        | 44.8          | 39.8             | 5.29        | 52.0          | 47.3   | 5.65        | 60.6          | 60.6   | 6.10        | 70.8          | 70.8   | 6.65        |
| 75   | 1800 | 25.2                                     | 23.2   | 4.15             | 31.3          | 28.7   | 4.51        | 36.9              | 33.6   | 4.88        | 42.7          | 37.9             | 5.24        | 49.4          | 45.0   | 5.64        | 57.6          | 57.6   | 6.13        | 67.3          | 67.3   | 6.73        |
|  | 2000 | 25.8                                     | 23.7   | 4.25             | 31.8          | 29.2   | 4.60        | 37.5              | 34.2   | 4.96        | 43.3          | 38.5             | 5.30        | 50.2          | 45.7   | 5.70        | 58.5          | 58.5   | 6.17        | 68.5          | 68.5   | 6.75        |
|  | 2200 | 26.3                                     | 24.2   | 4.34             | 32.3          | 29.7   | 4.69        | 38.0              | 34.7   | 5.04        | 43.9          | 39.0             | 5.37        | 50.9          | 46.3   | 5.76        | 59.4          | 59.4   | 6.22        | 69.4          | 69.4   | 6.78        |
| Multipliers for Determining the Performance With Other Indoor Sections |      |  |        |                  |               |        |             |                   |        |             |               |                  |             |               |        |             |               |        |             |               |        |             |
| Indoor Section   |      | Size                                     |        | Heating Capacity |               | Power  |             | Indoor Section    |        | Size        |               | Heating Capacity |             | Power         |        |             |               |        |             |               |        |             |
| 519CS  |      | 060                                      |        | 0.97             |               | 1.01   |             | 510B              |        | 060         |               | 0.98             |             | 0.99          |        |             |               |        |             |               |        |             |
| 519DS/509AS  |      | 057C                                     |        | 0.97             |               | 1.00   |             | 517E/GNS          |        | 060         |               | 1.01             |             | 1.02          |        |             |               |        |             |               |        |             |
|  |      | 060                                      |        | 0.98             |               | 1.00   |             |                   |        | 1.00        |               |                  |             |               |        |             |               |        |             |               |        |             |
|  |      | 061                                      |        | 0.98             |               | 0.99   |             |                   |        | 1.02        |               | 1.02             |             |               |        |             |               |        |             |               |        |             |
| 519E   |      | 060                                      |        | 0.97             |               | 1.00   |             | 517E & 315016-401 |        | 005         |               | 1.03             |             | 1.00          |        |             |               |        |             |               |        |             |
| 506B   |      | 061                                      |        | 0.98             |               | 0.99   |             | 617ANA/ANU/ANM    |        | 048*        |               | 0.94             |             | 1.00          |        |             |               |        |             |               |        |             |
|  |      | —  |        | —                |               | —      |             |                   |        | 060         |               | 1.03             |             | 0.99          |        |             |               |        |             |               |        |             |

†The Btuh heating capacity values shown are net "integrated" values from which the defrost effect has been subtracted. The Btuh heating from supplement heaters should be added to those values to obtain total system capacity.

‡The kw values include the compressor, outdoor fan motor, and indoor blower motor. The kw from supplement heaters should be added to these values to obtain total system kilowatts.

EDB = Entering Dry Bulb.

\*See fan coil downsizing requirements below.

### FAN COIL DOWNSIZING REQUIREMENTS:

1. The downsized fan coils are to be used only on MINIMUM static applications. The installed systems must have duct systems for maximum airflow at minimum external static pressure.
2. The indoor blower motor MUST be set to run on high speed tap by the installer. Motor is shipped, wired for medium speed tap.
3. The refrigerant charge MUST be adjusted per the suction superheat table provided on the unit information plate.
4. The maximum tube set length will be 50 feet.

### SYSTEM DESIGN

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01-inches water column.
2. Minimum outdoor operating air temperature for cooling mode without low-ambient operation accessory is 55°F (12.8°C).
3. Maximum outdoor operating air temperature for cooling mode is 125°F (51.7°C).
4. Minimum outdoor operating air temperature for heating mode is -30°F (-34.4°C).
5. Maximum outdoor operating air temperature for heating mode is 66°F (18.9°C).
6. For reliable operation, unit should be level in all horizontal planes.
7. Maximum elevation of indoor coil above or below base of outdoor unit is: indoor coil above = 50 feet, indoor coil below = 150 feet. (See items 8 and 9 following.) **Downsized Fan Coil: indoor coil below = 50 feet.**
8. For inter-connecting refrigerant tube lengths greater than 50 feet, consult Long-Line Application Guideline available from equipment distributor. For downsized coil application, maximum 50 foot length.
9. Not more than 36 inches of refrigerant tube should be buried in the ground. If necessary to bury tubes under a sidewalk, provide a minimum 6-inch vertical rise to the valve connections at the unit.
10. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
11. Mismatches of indoor coil capacity more than one size larger than outdoor unit capacity may result in inadequate indoor comfort.

### ACCESSORY DESCRIPTION AND USAGE

#### 1. Support Feet

Four stick-on plastic feet which raise the unit 4 inches above the mounting pad. This allows sand, dirt and other debris to be flushed from the unit base; minimizes corrosion.

SUGGESTED USE: Coastal installations.

Windy areas or where debris is normally circulating.  
Rooftop installations.

#### 2. Snow Rack

Coated wire rack which supports unit 18 inches above mounting pad to allow for drainage from unit base.

SUGGESTED USE: Heat pump installations in heavy snowfall areas.

Heat pump installations in snowdrift locations.  
Heat pump installations in areas of prolonged subfreezing temperatures.  
All commercial installations.

#### 3. Indoor Fan-Delay Relay

A SPST delay relay which briefly continues operation of the indoor blower motor to provide additional cooling after the compressor cycles off.

SUGGESTED USE: For improved efficiency ratings for certain combinations of indoor and outdoor units. (Refer to ARI Unitary Directory.)

#### 4. Energy Minder

An electric control for controlling a heat pump and gas or oil furnace system for maximum energy savings. It allows heat pump to operate down to a predetermined economic balance point temperature, then switches to allow furnace operation only below that temperature. Requires Outdoor Thermostat (Item 7) to be adjusted for economic balance point temperature.

SUGGESTED USE: All heat pump and gas- or oil-fired furnace combination systems.



**5. Efficiency Alarm**

A current-sensing lockout relay which provides immediate notification that compressor is not operating during a call for heating or cooling. Used with proper room thermostat, the thermostat light is turned on signifying service is required. This can minimize electrical cost increase due to operation of supplemental heaters only.

**SUGGESTED USE:** As a feature to notify owner immediately when the system is not operating most efficiently.

**6. Bypass Solenoid Valve—Defrost**

A refrigerant valve which opens during defrost to bypass refrigerant around the indoor metering piston. This increases the refrigerant flow into the warm indoor coil and thereby decreases defrost time.

**SUGGESTED USE:** As a feature to improve system defrost performance and decrease supplemental heat requirements during defrost.

**7. Outdoor Thermostat**

A SPDT temperature actuated switch which turns on supplemental electric heaters when outdoor air temperature drops below set point.

**SUGGESTED USE:** Heat pump installations with single-stage supplemental heaters smaller than 30 kw.

**8. Secondary Outdoor Thermostat**

A SPDT temperature actuated switch which turns on second-stage of supplemental electric heaters when outdoor air temperature drops below the second-stage set point.

**SUGGESTED USE:** Heat pump installations where two-stage operation of supplemental heaters is desired.

**9. COMPROTEC—Compressor Short Cycle Protector**

Solid state timing device which prevents compressor rapid recycling. Control provides an approximate 5-minute delay after power to the compressor has been interrupted for any reason, including normal room thermostat cycling.

**SUGGESTED USE:** Installations in areas where power interruptions are frequent.

Where user is likely to "play" with the room thermostat.

All commercial installations.

Installations where interconnecting tube length exceeds 50 feet.

High-rise applications.

**10. Compressor Start Assist—Capacitor/Relay Type**

Start capacitor and start relay gives "hard" boost to compressor motor at each start-up.

**SUGGESTED USE:** Installations where interconnecting tube length exceeds 50 feet.

Installations where outdoor design temperature exceeds 105°F (40.6°C).

Replacement installations with hard shut-off expansion valve on indoor coil.

**11. Sound Blanket**

Wrap around sound attenuation cover for the compressor. Reduces the sound level by about 0.2 bels.

**SUGGESTED USE:** Unit installed closer than 15 feet to quiet areas—bedrooms, etc.

Unit installed between two houses less than 10 feet apart.

**12. Thermostatic Expansion Valve (TXV) Kits**

A modulating flow control valve which meters refrigerant liquid flow rate into the evaporator in response to the superheat of the refrigerant gas leaving the evaporator. Kit includes valve, adapter tubes, and external equalizer tube. Both hard shutoff and RPB type valves are available. Valves contain internal bypass with check valve; external bypass and check valve not needed.

**SUGGESTED USE:** For improved system performance in cooling mode for certain combinations of indoor and outdoor units. (Refer to ARI Unitary Directory.)

**13. High-Pressure Switch**

Auto reset SPST switch activated by refrigerant pressure on high side of refrigerant circuit. Cycles compressor off if refrigerant pressure rises to about 400 psig. Provides additional protection against compressor damage due to loss of outdoor air flow. To prevent rapid compressor recycling, COMPROTEC (Item 9) can be used with this switch.

**SUGGESTED USE:** Installations exposed to very "dirty" outdoor air.

Installations where condenser inlet air temperature exceeds 125°F (51.7°C).

**14. Filter Drier—Bi-flow**

A device for removing contaminants from refrigerant circulating in a heat pump system; two direction flow for heat pumps.

**SUGGESTED USE:** All field connected split system heat pumps.

**15. Low-Ambient Operation Kit**

This solid state head pressure controller is a fan speed control device activated by a temperature sensor. It is specifically designed to control outdoor fan motor speed in response to saturated condensing temperature. For outdoor air temperatures between 55°F and 0°F (12.8°C and -17.8°C), it maintains condensing temperature at 100°F ± 0°F (37.8° ± 5°C). For single-phase units a ball bearing fan motor is also required.

**SUGGESTED USE:** Cooling operation at outdoor temperatures below 55°F (12.8°C).

All commercial installations. (Note: 3-phase units have ball bearing fan motors as standard.)

**16. Ball Bearing Fan Motor**

A fan motor with ball bearings which permits speed reduction while maintaining bearing lubrication.

**SUGGESTED USE:** Required on all single-phase units where Low-ambient Operation Kit (Item 15) has been added.

**17. Evaporator Freeze Thermostat**

A SPST temperature actuated switch which stops unit operation when evaporator reaches freeze-up conditions.

**SUGGESTED USE:** With Low-ambient Operation Kit (Item 15).

**18. Isolation Relay**

A SPDT relay which switches the low-ambient controller out of the outdoor fan motor circuit when the heat pump switches to heating mode.

**SUGGESTED USE:** All heat pumps where Low-ambient Operation Kit (Item 15) has been added.

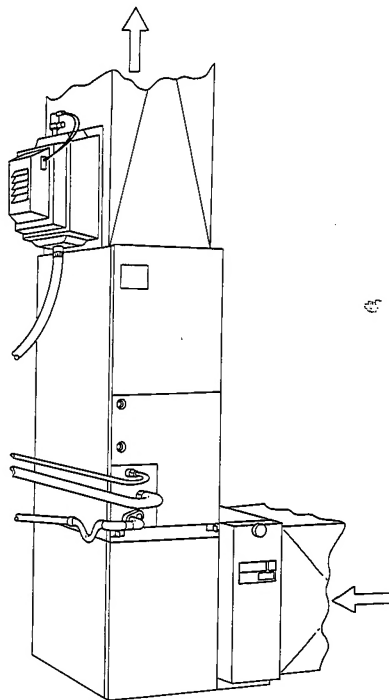
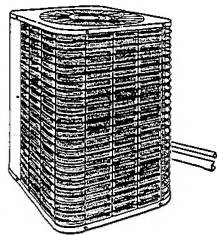
**19. Liquid Solenoid Valve**

An electrically operated shut-off valve to be installed at the evaporator inlet and which stops and starts refrigerant liquid flow in response to compressor operation. Maintains a column of refrigerant liquid ready for action at next compressor operation cycle. Note: Compressor start assist—Capacitor/Relay type—(Item 10) must be used also.

**SUGGESTED USE:** For improved system performance in air conditioners for certain combinations of indoor and outdoor units. (Refer to ARI Unitary Directory.)

In certain long line applications. (Refer to Long-Line Application Guideline.)

# MATCHED SYSTEM



A90311



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE  
WITH INSTALLATION INSTRUCTIONS